

ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672

4932 HRES HB 108 (FILE 2)

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# CORDOVA DISTRICT FISHERMEN UNITED

P.O. Box 939

Cordova, Alaska 99574

(907) 424-3447

February 23, 1987

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

Dear Rep. Donley:

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

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

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

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

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

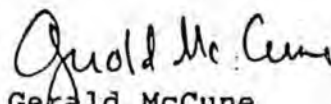
Ocean ranching is the biggest investment in the State of Alaska and the State should keep funding the enhancement programs. Commercial fishing has and always will be a major employer in Alaska, where fish farming will only employ a few.

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

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

Sincerely,

CORDOVA DISTRICT FISHERMEN UNITED

  
Gerald McCune  
Vice President

GM/mb1

cc: Members of House Labor and Commerce Committee

CORDOVA DISTRICT FISHERMEN UNITED  
RECOMMENDATIONS

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

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

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

4. Control development of fish farming sites.

5. Alaska keeps control of any aquaculture development.

6. Clearcutting at sites have quality control standards.

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

8. Regulations covering location of fish farms.

9. Studies of tidal flush out at fish farms.

10. Environmental impacts with respect to wild fish stocks.

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

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

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

14. No importation of Atlantic salmon eggs into Alaska.

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

## CDFU CONCERNS

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

## Alaska troll sector fights farmed salmon impact

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

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

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

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

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

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

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

The program involves promotions with buyers in European

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

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

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

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

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

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

## B.C. production adds to farmed salmon glut

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

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

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

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

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

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

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

# Troll prices dive to \$2.25

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

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

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

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

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

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

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

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

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

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

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

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

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

Sockeye non-retention regulations remain in effect.

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

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

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

# Toxic chemical detected in farm salmon

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

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

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

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

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

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

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

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

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

## Norway's salmon farms face tight regulation

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

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

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

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

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

- clearcut quality control standards;

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

- regulation covering the location of farms.

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

## National aquaculture policy claims to protect wild fish

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

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

Although B.C. has no fisheries

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

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

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

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

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

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

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

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

## Farm fish to hit wild salmon market

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

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

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

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

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

Virtually all Norwegian pro-

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

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

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

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

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

## Ireland freezes foreign fish farms

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

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

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

A policy review is under way.

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

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

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

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

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

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

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## DFO aquaculture subsidy hits \$3 million in '85

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

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

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

1984-1985 salmonid enhancement spending was frozen. A further \$500,000 was spent to assist aquaculturists to use the latest methods in rearing and harvesting.

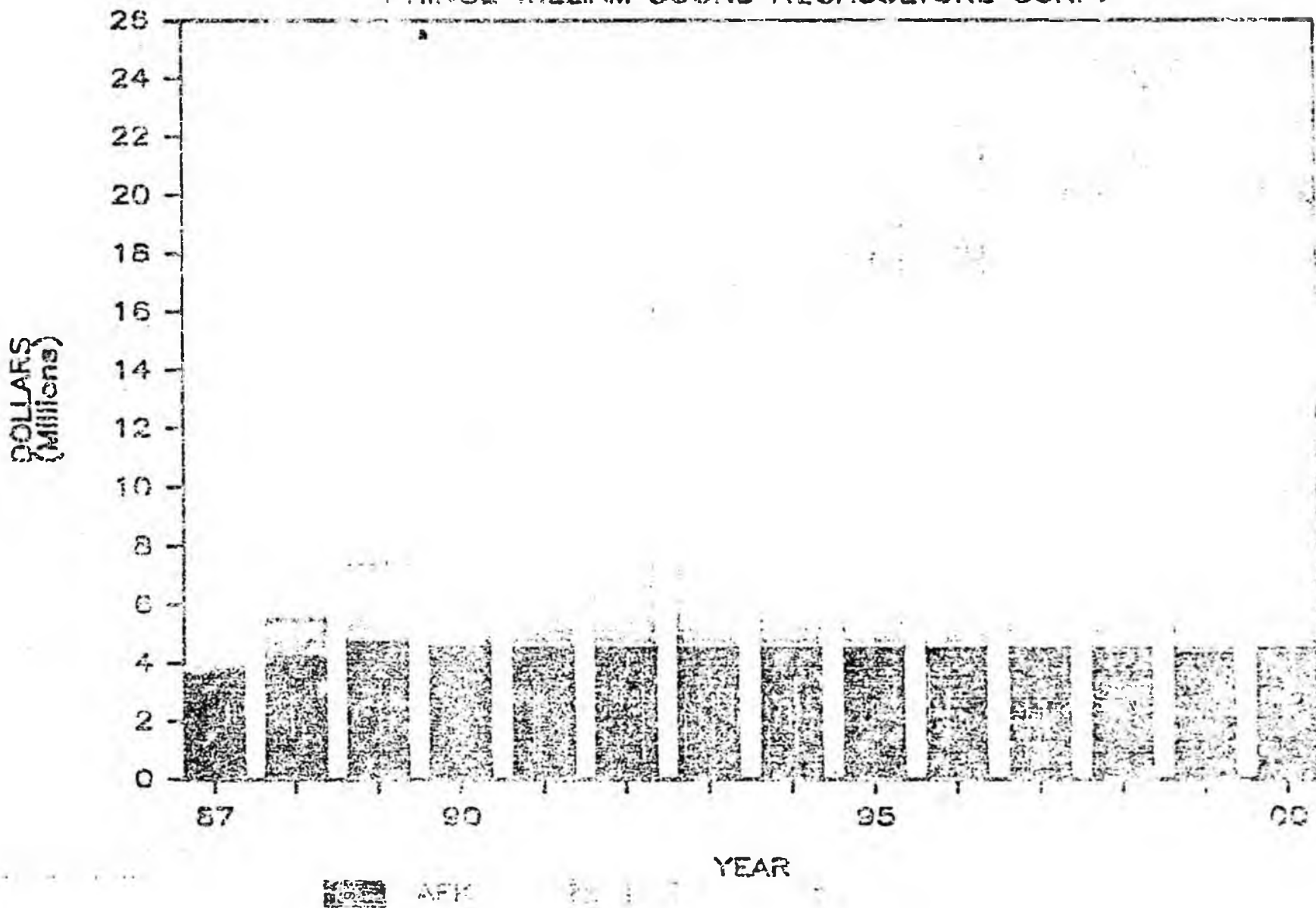
The amount spent on research has increased to \$2.5 million up to March 1985 from \$2.3 million during the previous year.

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

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

# TOTAL COMMERCIAL FISHING REVENUE

PRINCE WILLIAM SOUND AQUACULTURE CORP.



PRINCE WILLIAM SOUND SALMON HATCHERY PRODUCTION

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

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

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

## SALMON FARMING POSITION PAPER

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## II. Salmon Farming: Funding and Operational Considerations

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

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

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

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

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

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

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

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

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

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

# CONSTANTINE - ALASKA IVORY TRADERS

GARRI R. CONSTANTINE

BOX 207

DOUGLAS, ALASKA

99824

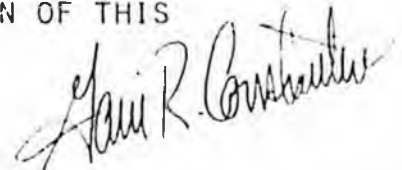
FEB 25 1987

CAPITOL 13  
DEAR REP. DONLEY

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

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

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



1024 WEST SIXTH AVENUE  
ANCHORAGE, ALASKA 99501  
(907) 274-4031

# ALASKA STATE HOUSE

OFFICE OF MAJORITY WHIP

CO-CHAIR  
HEALTH, EDUCATION & SOCIAL SERVICES

LABOR & COMMERCE  
SUBCOMMITTEE ON FOREIGN TRADE

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



REPRESENTATIVE JOHNNY ELLIS

## M E M O R A N D U M

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

FROM: Representative Johnny Ellis *JE*

RE: HB 108: Further Hearings

DATE: April 8, 1987

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

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

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

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

Memorandum re: HB 108  
April 8, 1987  
Page Two

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

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

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

1024 WEST SIXTH AVENUE  
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(907) 274-4031

WHILE IN SESSION  
P.O. BOX V  
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# ALASKA STATE HOUSE

OFFICE OF MAJORITY WHIP



CO-CHAIR  
HEALTH, EDUCATION & SOCIAL SERVICES

LABOR & COMMERCE  
SUBCOMMITTEE ON FOREIGN TRADE

REPRESENTATIVE JOHNNY ELLIS

## M E M O R A N D U M

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

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

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

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

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

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

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

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

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

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

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

February 25, 1987

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

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

Dear Representative Donley:

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

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

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

Thank you for the opportunity to comment.

Sincerely,

*Mark P. Kandianis*

Mark P. Kandianis

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

FEB 28 1987

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

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

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

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

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

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

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

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



COMMERCIAL SALMON FISHERMAN



# UNITED FISHERMEN OF ALASKA

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

*Chuck Wagon  
re suggested  
amendments*

Mr. Chairman and Members of the Committee:

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

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

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

We raise the following issues:

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

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

### 3. Funding problems that need to be addressed:

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

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

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

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

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

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

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

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

7. What are we trying to accomplish with pen-reared salmon? Are we trying to create a cottage industry, a "mom and pop" show up and down the coast, or are we trying to develop an environment for multi-national investors to exploit to the fullest by providing a few jobs and taking home the profits (if there are any) at the expense of several existing industries? If the State is desirous of maximum substantial benefit to the State itself, or its residents, it will have to make a tremendous financial investment in order to pull it off. Norway had to do it because its rural coastal communities were dying up from lack of fisheries resources to sustain their economy. Norway also had very little natural "salmon" resources to worry about or consider affecting. Alaska's present economic situation and flourishing salmon stocks do not mandate such a move. Besides, it does not appear that the limited size structure restricted by Norway to accomplish their goal will be economically viable in Alaska. Without the money to do it in-state, the only logical option would be to allow outside investors to come in, bring their expertise and equipment with them, and control an industry that will provide just a few local resident jobs while competing for General Fund dollars and services at our expense. In my "logical" scenario, it would be prudent for the state to carefully analyze the actual value gained for potential costs incurred. As commercial fishermen, we realize our direct impact of pen-reared salmon on Alaska wild salmon. While we don't feel that pen-reared will ever really replace our harvest, it is already having an impact and will continue to feel this year with or without Alaska being involved. If that Committee is intent on pursuing H.R. 1013 in the present form, then it should consider including in the legislation a time frame during which pen-reared salmon could be sold in order to not directly compete for market space during the wild salmon seasons.

Other suggestions are:

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

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

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



# UNITED FISHERMEN OF ALASKA

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

## UNITED FISHERMEN OF ALASKA

### RESOLUTION 87-3

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

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

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

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

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

*Robert H. Blake*

Robert M. Blake  
President

*2/6/87*

Date

MAR 16 1987

March 3, 1987

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

Dear Representative Herrman:

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

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

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

The Honorable Adelheid Herrman  
March 3, 1987  
Page 2

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

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

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

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

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

The Honorable Adelheid Herrman  
March 3, 1987  
Page 3

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

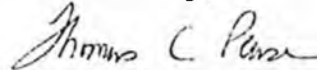
Finally, fish farming can bolster Alaska's depressed economy. It can provide new opportunity for stranded commercial fishermen like me. More importantly, a mariculture industry can directly employ thousands of Alaskans on a year-round basis, and can indirectly employ thousands more in the fields of engineering,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

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

The Honorable Adelheid Herrman  
March 3, 1987  
Page 4

dimension to Alaska's proud title of "the salmon capital of  
the world."

Sincerely,



Thomas C. Pease

MAR 12 1987

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

1621 Tongass Ave., #103

(907) 225-9605

Ketchikan, Alaska 99901

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

March 4, 1987

Dear Representative Herrmann:

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

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

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

**PRIVATE NON PROFIT HATCHERIES**

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

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

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

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

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

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

S.S.R.A.A.

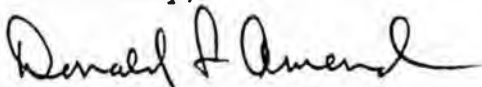
It has been proposed that farmed salmon are superior to commercially harvested salmon because farmed salmon can be provided all year long. It has also been argued that Alaska should enter this market because it is already happening around the world. Technology has vastly improved the frozen products,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

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

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

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

Sincerely,



Donald F. Amend  
General Manager

Enclosures

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

## 1986 ADULT RETURNS

16-Feb-87

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

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

## SSRGA FRY/SMOLT RELEASE

	1960	1961	1962	1963	1964	1965	1966	1967	60A
<b>COMB</b>									
W.L.	196,000	224,300	219,400	208,000	308,500	855,600	234,200	150,000	
N.E.	280,000	560,000	340,000	980,000	950,000	2,153,000	2,356,000	2,300,000	
E.W.C.	0	0	0	94,000	0	0	100,300	200,000	
NAKAT	0	0	0	0	0	0	99,000	90,000	
<b>SUBTOTAL</b>	<b>476,000</b>	<b>784,300</b>	<b>559,400</b>	<b>1,282,000</b>	<b>1,266,500</b>	<b>3,008,600</b>	<b>2,789,500</b>	<b>2,740,000</b>	
<b>CHINDOK</b>									
W.L.	0	0	145,500	0	0	27,200	119,000	90,000	
N.E.	0	0	0	135,000	144,000	231,400	950,000	750,000	
C.I.	0	0	0	0	0	0	51,000	800,000	
E.W.C.	0	0	0	0	0	0	97,500	300,000	
<b>SUBTOTAL</b>	<b>0</b>	<b>0</b>	<b>145,500</b>	<b>135,000</b>	<b>144,000</b>	<b>258,600</b>	<b>1,197,500</b>	<b>1,940,000</b>	
<b>S. CHUM</b>									
NAKAT	1,340,000	3,145,000	5,076,000	6,240,000	0	4,846,000	4,100,000	4,000,000	
N.E.	0	0	0	1,146,100	2,044,000	8,300,000	9,500,000	9,000,000	
E.W.C.	0	0	0	0	0	0	1,219,000	1,500,000	
<b>SUBTOTAL</b>	<b>1,340,000</b>	<b>3,145,000</b>	<b>5,076,000</b>	<b>7,386,100</b>	<b>2,044,000</b>	<b>13,146,000</b>	<b>14,619,000</b>	<b>14,500,000</b>	
<b>FALL CHUM</b>									
NAKAT	0	0	0	0	0	10,040,000	2,360,000	3,500,000	
N.E.	1,340,000	15,437,200	8,272,900	14,600,000	24,500,000	31,900,000	17,015,000	33,000,000	
<b>SUBTOTAL</b>	<b>1,340,000</b>	<b>15,437,200</b>	<b>8,272,900</b>	<b>14,600,000</b>	<b>24,500,000</b>	<b>41,940,000</b>	<b>19,375,000</b>	<b>36,500,000</b>	
<b>SOCKEYE</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100,000</b>	<b>100,000</b>	
<b>GRAND TOTAL</b>	<b>3,160,000</b>	<b>19,360,500</b>	<b>14,050,800</b>	<b>23,400,900</b>	<b>26,834,500</b>	<b>56,350,200</b>	<b>36,200,000</b>	<b>55,700,000</b>	
<b>ZEROS</b>									
<b>COMB</b>									
W.L.	0	0	0	0	153,000	0	0	0	
N.E.	0	0	0	0	754,000	0	0	0	
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>907,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>CHINDOK</b>									
W.L.	0	0	0	0	0	12,600	0	0	
N.E.	0	0	0	0	205,900	407,200	2,300,000	1,500,000	
C.I.	0	0	0	0	0	0	230,000	250,000	
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>205,900</b>	<b>419,800</b>	<b>2,530,000</b>	<b>1,750,000</b>	

NUMBER OF FISH - ALL SPECIES

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

VALUE OF ALL GEAR GROUPS

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

SSRAA PRODUCTION ALL S.E. ALASKA

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

STATE OF ALASKA  
THE LEGISLATURE

POUCH Y STATE CAPITOL  
JUNEAU, ALASKA 99811  
907 465 3800

LEGISLATIVE AFFAIRS AGENCY

M E M O R A N D U M

February 25, 1987

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

TO: Representative Dave Donley

FROM: Edward H. Hein *EH*  
Legislative Counsel

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

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

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

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

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

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

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

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

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

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

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

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

AS 08.06.900 defines terms for AS 08.06.

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

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

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

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

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

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

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

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

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

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

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

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

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

EHH:csh  
c7/069

# STATE OF ALASKA THE LEGISLATURE

POUCH Y STATE CAPITOL  
JUNEAU, ALASKA 99811  
907 465 3800

## LEGISLATIVE AFFAIRS AGENCY

M E M O R A N D U M

February 16, 1987

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

TO: Representative Johnny Ellis

FROM: Edward H. Hein *EH*  
Legislative Counsel

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

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

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Representative Johnny Ellis

Page 2

February 16, 1987

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

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

AS 08.06.900 defines terms for AS 08.06.

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

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

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

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

Sec. 8 inserts cross-references to AS 08.06, necessitated by sec. 2.

Sec. 9 exempts aquatic farming from the licensing requirements in AS 16.05 for sport fishing, hunting, and commercial fishing and vessels.

Sec. 11 exempts purchases and sales of aquatic farm products from the requirements of AS 16.10.265 - 16.10.267, relating to commercial fish purchases and possession of limited entry permits.

Sec. 12 provides for the inclusion of aquatic farmers in regional aquaculture associations.

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Sec. 15 provides that requirements relating to funds derived by a hatchery from the sale of salmon eggs to a hatchery that supplies aquatic farms must be expended in the same manner as provided for funds from sales of eggs to other hatcheries.

Sec. 16 makes the provisions of AS 16.43, relating to limited entry, inapplicable to activities authorized under an aquatic farm permit.

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

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

EHH:mi  
wkmi1/047

# STATE OF ALASKA

## DEPARTMENT OF NATURAL RESOURCES

OFFICE OF THE COMMISSIONER

STEVE COWPER, GOVERNOR

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

February 17, 1987

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

Dear Representative Donley:

Subject: House Bill 108, relating to Aquatic farming.

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

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

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

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

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

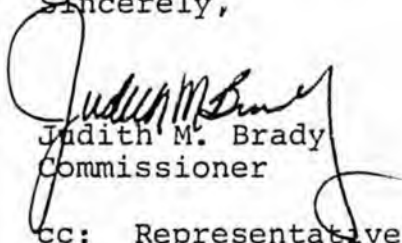
The Honorable Dave Donley

-2-

February 17, 1987

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

Sincerely,



Judith M. Brady  
Commissioner

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

## HB 108 Analysis

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

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

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

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

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

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

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

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

#### Position Summary

##### Fiscal Year '88

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

##### Fiscal Years '89 and '90

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

##### Fiscal Years '91 and '92

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

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

REQUEST: \_\_\_\_\_

Bill Version: HB 108  
Publish Date: \_\_\_\_\_

Revision Date: 2-4-87

Agency Affected: Natural Resources  
BRU: Land and Water Management

Title: An Act Relating to Aquatic Farming

Sponsor: Ellis, Rieger, Cotten, Brown,  
Requestor: etc.

Components: \_\_\_\_\_

**EXPENDITURES/REVENUES: (Thousands of Dollars)**

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

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

GENERAL FUND	0	107.6	202.3	202.3	238.6	238.6
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>107.6</b>	<b>202.3</b>	<b>202.3</b>	<b>238.6</b>	<b>238.6</b>

**POSITIONS:**

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

ANALYSIS : (Attach a separate page if necessary)

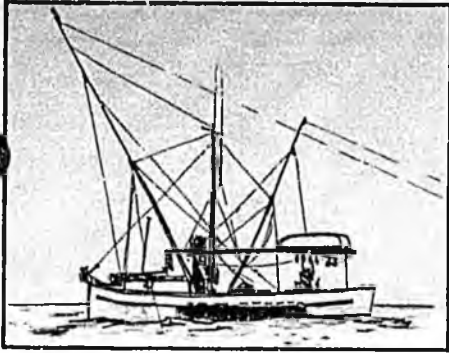
See Attached

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

Approved by Commissioner: [Signature] Date: \_\_\_\_\_  
Agency: Natural Resources

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

MAR 03 1987



# Alaska Trollers Association

REPRESENTING ALASKA POWER TROLLERS

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

TESTIMONY OF THE ALASKA TROLLERS ASSOCIATION

RE HB-108 AND SB-106:

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

2/16/87

Earl E. Krygier  
Executive Director

## EXECUTIVE SUMMARY

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

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

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

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

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

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

## INTRODUCTION

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

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

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

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

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

#### MARKET CONSIDERATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

## BIOLOGICAL CONCERNS

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

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

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

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

#### MANAGEMENT AND FISCAL CONCERNS

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

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

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

## OVERSELLING THE ECONOMIC BENEFITS OF SALMON PEN REARING

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

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

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

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

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

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

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

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

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

## SUMMARY

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

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

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

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

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

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

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

Need, a very rough  
draft at some  
language

Please give me  
your opinions

*Brent*

M E M O R A N D U M

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

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

DATE: March 15, 1987

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

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

(a) The commissioner shall issue a permit if he/she finds that

- (1) the proposed means of construction are adequate;
- (2) the proposed use of tideland is beneficial; and
- (3) the proposed permit and/or lease is in the public interest.

(b) In determining the public interest, the commissioner shall consider

- (1) the benefit to the applicant resulting from the proposed permit and/or lease;
- (2) the ~~effect~~<sup>benefit</sup> of the economic activity resulting from the proposed permit and/or lease;
- (3) the effect on fish & game resources and on public recreational opportunities;
- (4) the effect on public health;
- (5) the intent and ability of the applicant to complete the proposed activity for which the permit and/or lease is applied for;
- (6) the effect upon access to navigable or public waters.

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

AS 38.05.\_\_\_\_ TERMS OF PERMIT AND/OR LEASE.

AS38.05.\_\_\_\_ TIME FOR CONSTRUCTION, COMPLETION, AND PROVE UP.

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

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

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

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

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

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

M E M O R A N D U M

TO: ~~Paula Burgess, DNR~~ <sup>NED</sup>

FROM: Brent C. Paine, staff  
Representative Steve Rieger

DATE: April 10, 1987

RE: Permit Process for Mariculture Operations

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

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

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

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

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

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

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

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

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

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

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

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

2. Environmental Surveys

- A. Site Characterization Survey

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

- B. Hydrographic/Bathymetric Survey

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

3. Habitat Surveys

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

4. Conflicting Use Surveys

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



# Alaska State Legislature

HOUSE OF REPRESENTATIVES  
COMMITTEE ON RESOURCES

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

## M E M O R A N D U M

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

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

Representative ~~William~~ Cotten

APR 8 1987

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

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

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

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

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

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

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

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

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

Stone  
Box 83  
Cordova  
Alaska 99574

Rocky Stone

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

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

Resolution No. 713

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

R E C I T A L S

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

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

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

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

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

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

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

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



## MOSS LANDING MARINE LABORATORIES

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

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

April 10, 1987

Dear Representative Cotton,

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

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

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

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

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

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

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

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

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

Sincerely,

*Lucy Wold*

Lucy Wold

Jon C. Zuck  
4340 Raspberry Road  
Anchorage, Alaska 99502

April 7, 1987

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

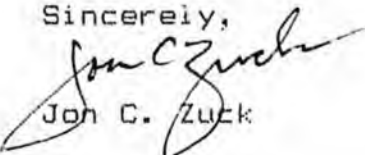
Dear Representative Cotten:

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

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

Thank you for your attention to this matter.

Sincerely,

  
Jon C. Zuck

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



# Peratrovich, Nottingham & Drage, Inc.

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

April 7, 1987

. ED 87000r

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

Dear Representative Herrmann:

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

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

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

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

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

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

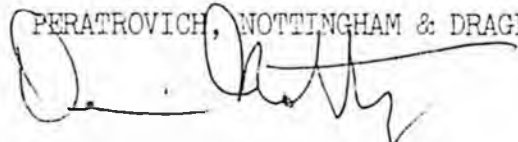
Representative Adelheid Herrmann  
April 7, 1987/87000r  
Page 2

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

Thank you.

Sincerely,

PERATROVICH, NOTTINGHAM & DRAGE, INC.



Dennis Nottingham, P.E.  
President

DN/jk/LP

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

