

HB

406

9-LS1485\C
Utermohle
4/18/96

CS FOR HOUSE BILL NO. 406()
IN THE LEGISLATURE OF THE STATE OF ALASKA
NINETEENTH LEGISLATURE - SECOND SESSION

BY

Offered:
Referred:

Sponsor(s): REPRESENTATIVE WILLIAMS

A BILL

FOR AN ACT ENTITLED

1 "An Act relating to waste and use of salmon; and providing for an effective
2 date."

3 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

4 * Section 1. AS 16.05.060 is amended by adding a new subsection to read:

5 (d) The commissioner may by emergency order suspend or otherwise limit
6 operations authorized to discard pink salmon or chum salmon carcasses under a permit
7 issued under AS 16.30.060.

8 * Sec. 2. AS 16.30 is amended by adding new sections to read:

9 ARTICLE 2. USE AND WASTE OF SALMON.

10 Sec. 16.30.050. WASTE OF SALMON. (a) A person may not intentionally,
11 knowingly, or with reckless disregard for the consequences waste salmon.

12 (b) This section does not apply to

13 (1) salmon from which milt or eggs are extracted under a permit issued
14 under AS 16.10.400 for lawful use as brood stock;

1 (2) activities lawfully conducted under a permit issued under
2 AS 16.30.060.

3 (c) A person who violates this section is guilty of a class A misdemeanor.

4 (d) In this section,

5 (1) "flesh" means all muscular body tissue surrounding the skeleton;

6 (2) "person" has the meaning given in AS 01.10.060 and includes a
7 joint venture; "person" does not include the state or federal government;

8 (3) "waste" means the failure to use or sell the flesh of a salmon for
9 human consumption, production of food for domestic animals, scientific purposes,
10 display purposes, educational purposes, or other uses authorized by the commissioner
11 under AS 16.30.060; "waste" does not include

12 (A) normal inadvertent loss of flesh that cannot be prevented
13 by practical means; or

14 (B) failure to use or sell spoiled, diseased, or contaminated
15 salmon flesh, unless the spoilage or contamination occurs as the consequence
16 of an intentional, knowing, or reckless act.

17 Sec. 16.30.060. USE OF HATCHERY PINK AND CHUM SALMON. (a)
18 Notwithstanding AS 16.30.050, a person who holds a hatchery permit issued under
19 AS 16.10.400 or a salmon limited entry or interim-use permit issued under AS 16.43
20 may remove and sell eggs from, and discard the carcasses of, certain pink salmon or
21 chum salmon, if the person has received a permit under this section. The
22 commissioner may adopt regulations to implement this section.

23 (b) The commissioner shall issue a permit to a person who holds a hatchery
24 permit issued under AS 16.10.400 or a salmon limited entry or interim-use permit
25 under AS 16.43 and who applies for the permit in writing. The permit authorizes the
26 permittee to discard the carcasses of pink salmon or chum salmon that

27 (1) originated from a hatchery;

28 (2) are harvested by the permittee in a hatchery terminal area, hatchery
29 special harvest area, or hatchery remote release site;

30 (3) have matured to the extent that the flesh cannot be sold or marketed
31 profitably; and

1 (4) cannot be reasonably put to another lawful use at the hatchery or
2 point of landing; and

3 (5) cannot be given away despite reasonable efforts to do so.

4 (c) Before disposing of pink salmon or chum salmon under the permit, the
5 permittee shall offer the salmon, free of charge, to food banks or to the public. A
6 permittee shall provide timely notice of the availability of the salmon to food banks
7 and the public and allow a reasonable time for the salmon to be collected by a food
8 bank or the public before disposing of the salmon. A permittee is not required under
9 this subsection to

10 (1) transport the salmon to a location other than

11 (A) the permittee's normal place of business; or

12 (B) a point of landing in the vicinity of the place where the
13 salmon are harvested; or

14 (2) preserve or process the salmon.

15 (d) A permittee shall

16 (1) maintain detailed records of

17 (A) salmon offered to food banks and to the public;

18 (B) salmon that are discarded under the permit;

19 (C) all attempts to sell or market salmon that are discarded
20 under this section; and

21 (2) before December 15 of each year, submit a written report containing
22 information maintained under this subsection and other information that may be
23 required by the commissioner by regulation.

24 (e) Information submitted to the department under this section is a public
25 document. Records maintained under (d) of this section are subject to inspection by
26 the department, the Department of Public Safety, or the Department of Environmental
27 Conservation.

28 (f) A permittee may not discard pink salmon or chum salmon under this
29 section except as provided by the commissioner, if the commissioner suspends or
30 otherwise limits operations under the permit by emergency order under AS 16.05.060.

31 (g) If the commissioner determines that the operation of a permittee is not in

1 compliance with this section, the commissioner may suspend or limit the operation of
2 the permittee under this section. The operation of a permittee is not in compliance
3 with this section if the permittee has

4 (1) not made reasonable efforts to give salmon to food banks or the
5 public before discarding the salmon;

6 (2) failed to maintain records required under this section or submit a
7 report required under this section;

8 (3) falsified information in records or reports required by this section;

9 or

10 (4) discarded salmon in a manner inconsistent with state, federal, or
11 municipal law.

12 (h) Pink salmon and chum salmon subject to disposal under this section may
13 be sold and used for bait in a commercial, personal use, or subsistence fishery to the
14 extent otherwise allowed by law.

15 (i) A person who intentionally, knowingly, or with reckless disregard for the
16 consequences violates this section or a regulation or emergency order adopted under
17 this section is guilty of a class A misdemeanor.

18 * Sec. 3. TRANSITION; REGULATIONS. The commissioner of fish and game may
19 proceed to adopt regulations to implement the provisions of AS 16.30.050 and 16.30.060,
20 added by sec. 2 of this Act. The regulations take effect under AS 44.62 (Administrative
21 Procedure Act) but not before the effective date of sec. 2 of this Act.

22 * Sec. 4. AS 16.05.831 is repealed.

23 * Sec. 5. Sections 1, 2, and 4 of this Act take effect January 1, 1997.

24 * Sec. 6. Section 3 of this Act takes effect immediately under AS 01.10.070(c).

Alaska State Legislature



Representative William K. Williams

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SPONSOR STATEMENT

House Bill 406

Committee Substitute

THE HEAVY ROE BILL

Commercial salmon fishermen and hatchery operators are undergoing tremendous economic strain. The facilities producing pink and chum salmon are struggling to meet financial obligations. House Bill 406 will allow some measure of relief and provide for utilization of roe from pink and chum salmon that might otherwise reap no economic return for those who have paid the costs of rearing the fish.

Hatchery pinks and chums are paid for by commercial fishermen through either a 2% or 3% tax on the gross value of a fisherman's harvest. These fish are made available to the common property fishery for harvest opportunity. Hatcheries harvest a portion of these fish at terminal areas for cost recovery purposes. In addition, fishermen harvest these fish in terminal areas. Sometimes the fish have deteriorated to a point where the flesh cannot be marketed profitably. These returning fish do not enter streams for purposes of propagation. If they are not harvested, they die and rot in terminal areas. House Bill 406 provides for a better utilization of these hatchery fish.

Committee Substitute for House Bill 406 clarifies in statute the authorized uses for hatchery pink and chum salmon. The bill will allow both hatcheries and salmon limited entry permit holders to remove and sell eggs and to discard carcasses under certain conditions.

The pink and chum salmon must have originated from a hatchery; be harvested in a designated area; have matured to the point that their flesh cannot be marketed profitably and cannot be put to any other lawful use at the hatchery site or be given away.

House Bill 406 will assist fishermen and hatchery operators as they move through this difficult transition to the future. House Bill 406 should not be viewed any differently than other incentives and assistance rendered by the legislature to struggling industries.

Good morning. My name is Kay Andrew and I am here representing the United Southeast Alaska Gillnetters Association.

As many of you know, falling fish prices is causing a tremendous strain on the families of our fishermen. Over the last few years, some gillnetters have been taking eggs from fish in terminal harvest areas to sell on the very lucrative roe market.

For the past few years our fishermen, who have their processing permits, have taken roe in terminal harvest areas. Now our fishermen are being told they can no longer do this. Why? Because processors don't like the competition and THEY have the attention of our administration.

Since January we have tried to work with this administration to find a solution. They have continually refused to cooperate by not allowing the gillnet fleet any representation. They put together a committee and had a ROE MEETING in Anchorage. Even though Southeast Gillnetters have been involved in the taking of roe, none were asked to serve on this committee. Even after several calls to the administration to get a Southeast gillnetter on the committee, none were appointed. Instead a Southeast troller, with no "roe" experience and a Kodiak seiner, also with no roe experience, were asked to sit on the committee. Our organization then flew two gillnetters up to the meeting so that we could have a voice before the committee. As we expected, no agreements were reached at the

meeting and another was scheduled for mid-February. Because a member of the committee was unable to make the February meeting, we asked the Department to replace that member with one of the Southeast gillnetters who attended the first meeting. After several calls to the Governor's office and the Department, they relented and allowed us to have a participant.

Prior to the first meeting of the committee, and after we asked the Governor's office for representation on the committee, we asked Rep. Williams to sponsor legislation that would allow our fishermen to be able to take roe in terminal harvest areas. We advised the Governor's office that we were doing this and we were asked by them if we would not ask for a hearing until after the committee had met. This administration has dragged this process out until now, at which time they are attempting to slip in regulations which entirely exclude the fishermen. This is contrary to what was said at the committee meetings. The administration said that if no consensus could be reached, then status quo would prevail...our fishermen would be allowed to take roe in terminal harvest areas.

Now they are going back on their word.

Since the second and final committee meeting in February, we have been waiting patiently for this administration to come up with its final report on the meeting. Since there was no consensus on how to tackle this issue, we

were surprised to find out the administration was going to pass regulations which did not allow our fishermen to take roe from terminal harvest areas.

We contacted the administration and offered to work with them to find a solution we all could live with, but to no avail. We told them that there was no market for a majority of the fish in the terminal harvest areas. In fact most processors don't buy those fish because of their dark color. However, since the fishermen paid 3% of their gross for these fish, they should be allowed to harvest them.

We also asked the administration if they could review the provision in two or three years to give us a chance to find a market for the dark fish. This way our fishermen can continue to utilize the fish they pay for to the best of their ability.

Thank you for giving me the opportunity to testify. I would be happy to answer any questions you might have.

Southern Southeast Regional Aquaculture Association, Inc.

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FEB 29 1996

February 23, 1996

Representative Bill Williams
Alaska State Legislature
Room 128
State Capital
Juneau, Alaska 99801-1181

Dear Representative Williams:

You recently introduced H.B. 406 relating to the removal of roe from hatchery produced salmon. I believe you are aware of the task group appointed by the Governor to determine if a consensus could be reached on this issue because of concerns of wanton waste of salmon. I was a member of this task group and we met for four days in Anchorage, two days in January and two days in February.

Nothing of substance came from the task group because a consensus could not be reached over the waste issue. Most people were not aware of how hatcheries operate and the controls already in place. Many people approached this as an allocative issue and not as a waste issue. Consequently, no agreement could be reached, even roe from salmon carcasses after they are spawned at the hatchery. They took the extreme position that every fish should be used, no matter the condition of the fish, the cost of processing them, or whether a market existed or not. A lot of hatchery bashing occurred.

There is a strong anti-hatchery sentiment in some areas of the state. I believe that proceeding with H.B. 406 at this time will only strengthen the anti-hatchery feelings and much controversy will occur. We do not need H.B. 406 to operate and I believe that it would be better to set this aside for now.

I do, however, have some serious concerns and we need to be careful of any legislation that the administration may propose as a result of the task group. The main point of contention of the task group was inclusion of any statutory language which would give the commissioner authority to grant exemptions to the wanton waste statutes. I strongly believe that statutory authority to grant exemptions is essential. The extreme position of no exemptions cannot be allowed. Forcing hatchery operators, fishermen, or processors to market fish no matter their condition, cost to process, or market value is not acceptable.

February 23, 1996

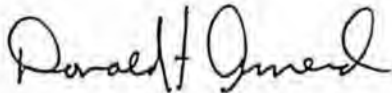
Page 2

I also do not believe that extracting the valuable portions of the fish (eggs) and discarding carcass is justifiable as a general practice. The situations for roe extraction should be very limited, such as special harvest areas where no wild fish are present and there is limited or no natural spawning areas. This can be addressed through regulation, but statutory authority is needed to assure these situations can be exempted.

The State of Alaska has invested in the hatchery program and commercial fishermen have invested via their 3% enhancement tax. Market conditions are so poor, at present, that processors either do not buy fish from fishermen or they pay an extremely low price. Processors treat hatchery bids the same. This forces hatcheries to harvest excessive numbers of fish to meet financial goals and fishermen do not receive a fair return from their investment in the hatchery program. However, there is a high value to the eggs. The fish are near death and the quality is poor. They will be "wasted" if they die and rot with the eggs in them. The roe value should be recovered without forcing anyone to market the carcass. This will increase the financial return to both fishermen and the hatcheries. Processors would also benefit from not processing and selling fish at below cost and they could pay fishermen and hatcheries more for the fish (eggs) they purchase. This also helps remove the glut of fish on the market especially low value salmon which only further depresses the market. Is this not the best solution for everyone??

I urge you to be aware of any legislative action which would not allow exemptions from the waste statutes. Exemptions must be allowed for the benefit of everyone. Of primary importance is to not confuse the waste issue of the factory trawlers, who dump high quality fish flesh, to a salmon near death which is of very low quality.

Sincerely,

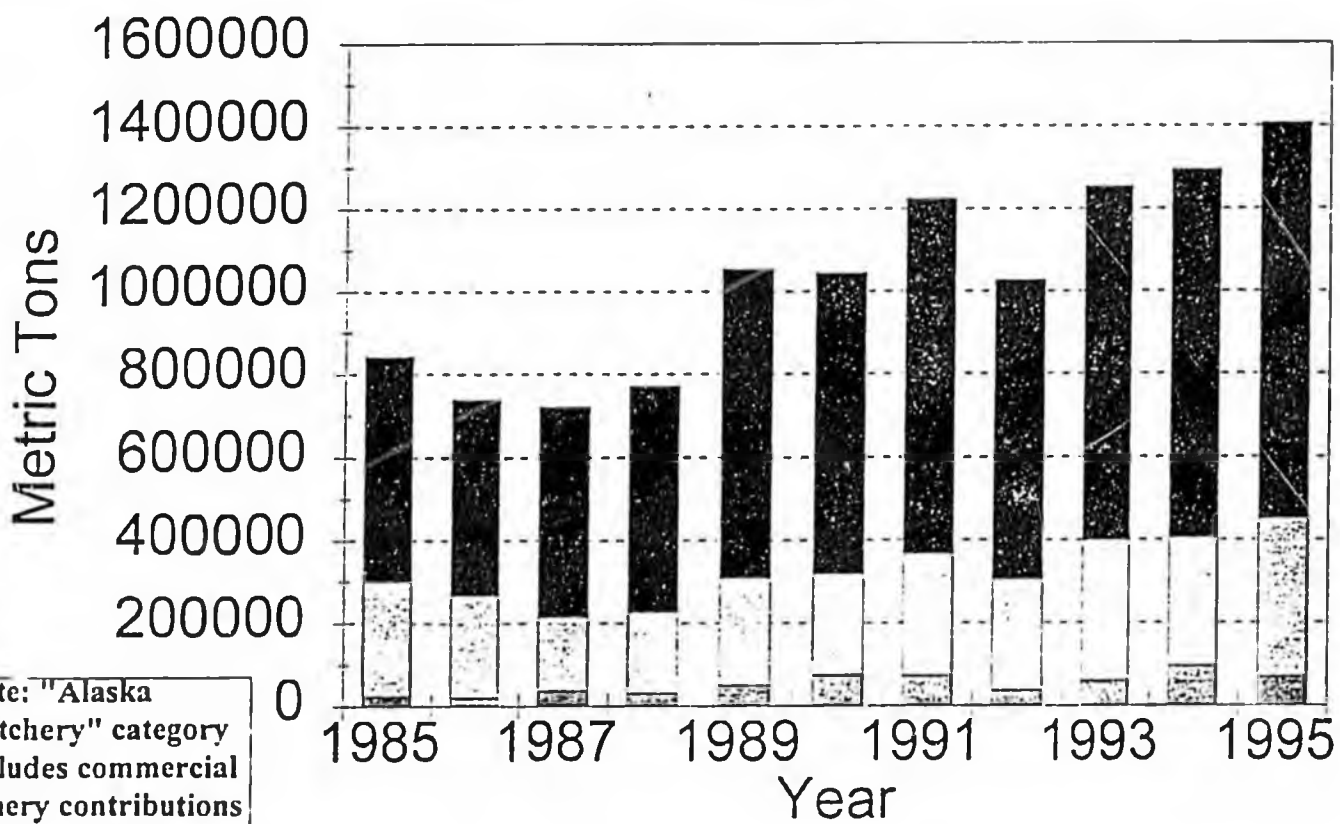


Donald F. Amend
General Manager

cc: Senator Taylor
Ray Gillespie

26/14i

World Salmon Production (1985-1995)

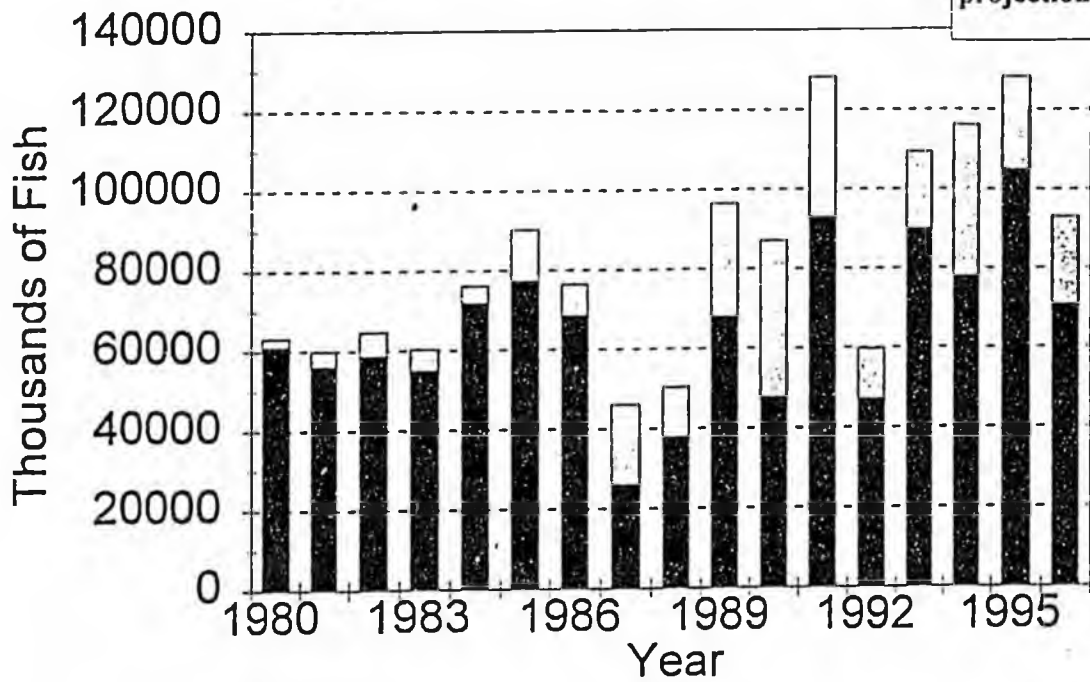


Note: "Alaska Hatchery" category includes commercial fishery contributions from hatcheries

Alaska Hatchery
 Alaska Wild
 Other

Statewide Harvest of Pink Salmon
(1980-1995)

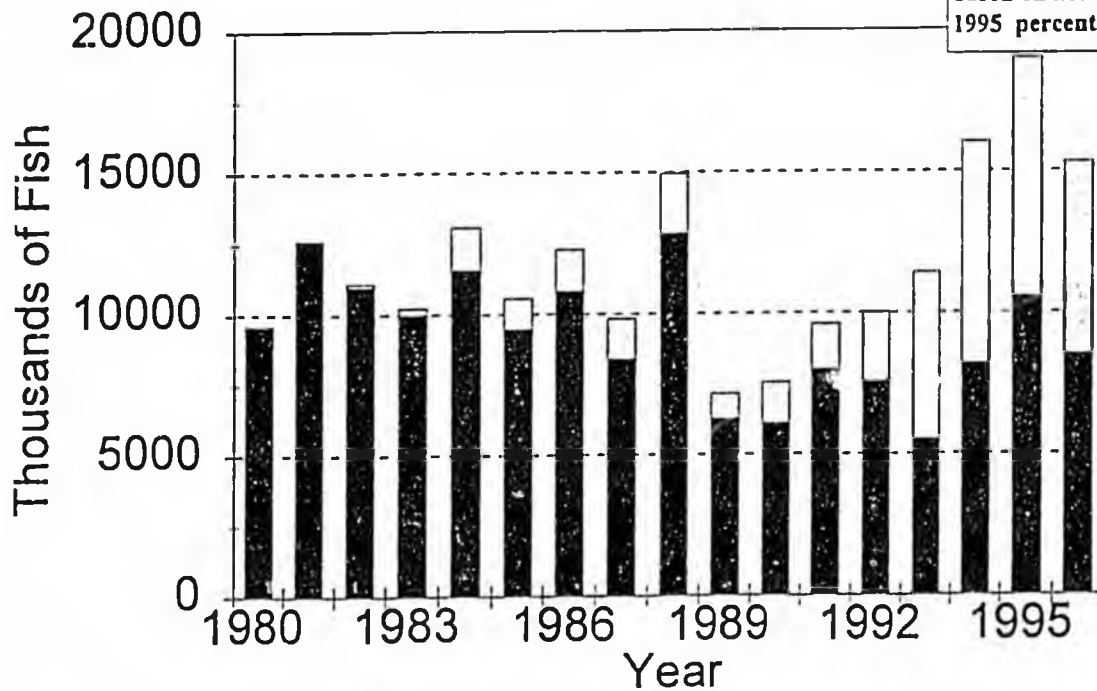
Note: 1996 data are projections



■ Wild □ Enhanced

Statewide Harvest of Chum Salmon
(1980-1995)

Note: 1996 projection for enhanced catch based on actual 1995 percentages



■ Wild □ Enhanced

1995 Salmon Roe Sales from PNP Hatcheries

Lbs of Roe Value	Species					Total
	Pink	Chum	Coho	Chinook	Sockeye	
	65,004	569,707	66,114	5,585	6,000	712,410
	\$226,014	\$2,823,702	\$323,270	\$20,670	\$33,639	\$3,427,294

Pounds of Roe and Value

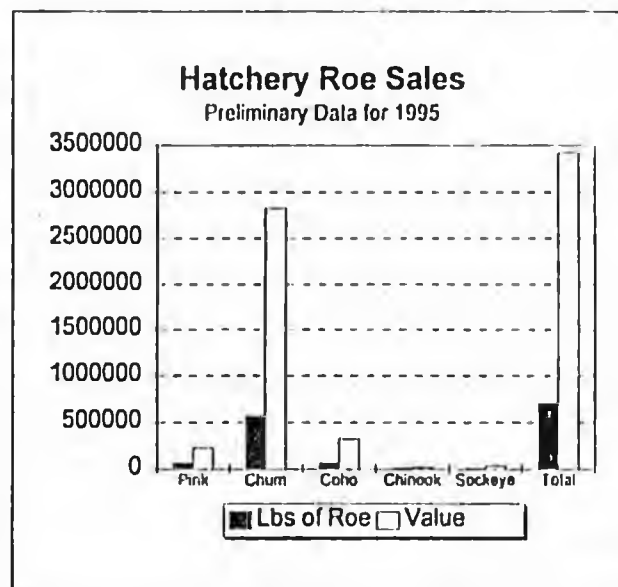
PNP Operator	Pink		Chum		Coho		Chinook		Sockeye	
	Lbs	Value	Lbs	Value	Lbs	Value	Lbs	Value	Lbs	Value
DIPAC	14,377	\$51,458	17,995	\$88,314	5,469	\$25,106	1,817	\$5,907		
VFDA	42,134	\$150,875	6,204	\$30,426	23,243	\$102,669				
AAI	590	\$1,947	1,597	\$7,213						
SSRAA			473,696	\$2,350,000	28,608	\$160,386			6,000	\$33,639
NSRAA			36,399	\$178,668	8,151	\$32,573	3,145	\$14,763		
PWSAC	7,903	\$21,734	33,816	\$169,080	643	\$2,536	623			
	65,004	\$226,014	569,707	\$2,823,702	66,114	\$323,270	5,585	\$20,670	6,000	\$33,639

Carcass Disposal (associated with roe sales)

	Pink	Chum	Coho	Chinook	Sockeye
DIPAC	26,810	17,714	4,864	545	
VFDA	76,964	6,184	13,499		
AAI	3,629	1,427			
SSRAA		8,909			
NSRAA		32,368	5,625	1,244	
PWSAC	16,243	31,833		181	
	123,646	98,435	23,988	1,970	0

Fish Harvested in 1995

	Pink	Chum	Coho	Chinook	Sockeye
DIPAC		267,880	9,675		
VFDA	2,529,931	1,256	8,093		
AAI		44,500			
SSRAA		941,571	23,080	1,109	7,258
NSRAA		309,400	180,855	21,525	
PWSAC	2,551,032	230,299	5,152	710	62,782
	5,080,963	1,794,906	226,855	23,344	70,040



**Overview of the
Alaska Chum Roe and Dark Chum Markets
by
Donald F. Amend, General Manager
Southern Southeast Regional Aquaculture Association, Inc.**

Gunnar Knapp, professor of Economics, gave a paper on "Perspectives on the Value of Alaska Salmon Roe" at the January 16, 1996 meeting in Anchorage which reviewed the salmon waste law and policies on the sale of salmon roe. His data showed that chum roe production was a distant third behind sockeye and pink salmon roe. However, the chum roe value was second to sockeye roe value because the roe yield on chum and the average chum roe prices were the highest of all species. Because of the high chum roe yield and price, chum roe value was the highest percentage of processors total roe sales, ex-vessel value, and average value per round pound harvested. Furthermore, the average wholesale chum price was declining faster than the average chum roe price; therefore the whole sale value of chum roe was more than 70% of the ex-vessel value and this percentage is increasing.

The Chum Roe Market

The primary market for salmon roe is Japan. Most salmon roe is made into Sujiko (caviar in the skein), but most of the chum roe is made into Ikura (single egg caviar). As chum salmon mature, the percent yield and egg recovery increases. The roe yield averages 3.5% in most commercial fisheries, but in terminal areas at the end of the run, the yield can average over 10 percent. The skeins are "rubbed" through screens to make Ikura. The recovery is low in immature roe, but can average near 80% in mature roe. Consequently, chum roe value increases in terminal areas at the end of the run. The flesh value of these chum is very low because they have dark skin and pale meat, therefore, over 400% of the ex-vessel value is in the roe.

Processors Roe Market

Ikura is sold mainly in Japan and the market is growing in North America and Europe. Most processors have preseason contracts with Japanese trading companies for all their roe production. The Japanese send technicians to work directly in the processing plant in space provided by the processor. The processor typically receives a contract price for the finished product, but the egg agreement can vary among the processor and/or the parent Japanese Company. In 1995 finished Ikura to U.S. Companies averaged about \$10.50 per pound.

Independent Roe Buyers

There are also buyers of just roe; Cassack Caviar, Franco Fish Products, and Northern Keta Caviar are examples. These companies buy roe from small processors who do not have the volumes of justify having Japanese technicians. They also buy from native fishermen, commercial fishermen, and from hatchery operations. Cassack Caviar does little marketing in Japan and their markets are Europe and North America. About 15% is made into bait and 85% for human consumption. Franco has a Japanese market, but also sells into Europe and North America. He also has a bait market.

The roe buyers purchase the eggs based on a "green" egg price. The eggs are taken from the fish, rinsed in a mild salt solution, and air shipped directly to the buyer. The typical buyer will purchase green eggs and pay all shipping costs. They will also provide the buckets for shipment. The eggs are then made into bait, Sujiko, Ikura and sold as finished products.

Roe Value

The value of the green roe depends on the quality. If not properly refrigerated or if held too long, the value is decreased or they may be rejected. Also, roe can be too mature. As eggs develop and begin to drop from the skein (eggs sac) just prior to spawning, they develop a "hard shell." Hard shell eggs leave a residue in the mouth when eaten and, therefore, are less desirable and less valuable. The most valuable roe is from chum just prior to spawning before the eggs loosen in the skeins, if they are extracted from the fish, kept cool, and processed within a few hours after death. Also, the finished roe must be properly processed, refrigerated, and reach the market in good condition.

Roe Prices

The green egg price varies according to market conditions, and where the eggs are purchased. Because most are sold in Japan, the Japanese market sets the price. In 1992 a low chum run returned to Japan and this drove the 1993 prices to a record high level. The Japanese wholesale price was over \$28 per pound for number one chum Ikura and the North America green egg price was close to \$9.00/lb. However, the Japanese chum run was high in 1993 and the price dropped to about \$16.00/lb. and the green egg price dropped to under \$6.00/lb. In 1994 another large Japanese chum run occurred and there was a large roe inventory going into the 1995 season. The Japanese "dumped" the 1994 inventory onto the market just as the 1995 season started and this kept prices down. Typically roe prices are high at the beginning of the season because fresh Alaska roe get to the market before the Japanese roe. However, this did not occur in 1995.

Despite the weakened Ikura market in 1995, egg buyers still purchased green roe at \$5.50 to \$6.00 per pound in S.E. Alaska. They were able to maintain prices because their markets did not depend entirely on Japanese sales. The Japanese buyers reduced prices slightly but the price was still good in relation to the price of the flesh. The current Tokyo wholesale price for No. 1 Alaska Ikura averages 3000 yen/kg and the exchange rate is about 106 yen to the dollar for a wholesale price of about \$13.00 per pound. Future roe prices will vary according to the yen-dollar exchange rate and the abundance of roe produced in Japan.

Future Roe Markets

The Japanese roe companies are saying that salmon roe consumption is still expanding in Japan, especially Ikura. Salmon roe consumption worldwide is also expanding and the most desired product is Ikura. Because chum salmon roe makes the best Ikura and other species roe is mainly made into Sujiko, the Ikura market is expected to remain relatively strong compared to fish prices. *This is an area in which the farmed salmon are not able to compete.*

The Chum Market

Chum prices and roe prices are driven by world market conditions. Farmed salmon now control the salmon market and the price of Alaska salmon follow the farmed salmon prices. In 1995 Alaska broke an all time statewide harvest of over 200 million salmon. The 1995 farmed salmon production exceeded the entire State of Alaska production. *If every hatchery was closed, it would not have any impact on world salmon or roe prices.* In fact, the entire state harvest of salmon could be eliminated, and in 4 to 5 years it would be replaced by farmed salmon. We can expect a continued high abundance of salmon into the near future.

Exemptions to the Waste Laws

No one should be allowed to waste salmon, but exemptions are needed. Dark skin, pale meat chum have a low or no market value. Part of the over abundance problem could be solved by discarding the dark chum with soft meat. However, these fish would still have a high egg value. Therefore, exemptions to the waste laws to allow discarding of the poor quality chum and harvesting the eggs should be allowed and this should include processors, catcher processors, and hatchery operators. The exemptions can be very specific and limited, but the commissioner should have the flexibility to make the exemptions apply to cover a variety of situations that exist statewide.

Fishers - Processors

Fishermen (catcher processors) are independent businessmen. They should be allowed to sell their catch to any processor they choose. Maximizing their economic return should be as important to them as any other business. Extracting roe from fish should be allowed, but exemptions from the waste laws would have to be restricted to limited areas and conditions. This is especially true in regions where fishermen pay an enhancement tax and they have an ownership in the fish. Special Harvest Areas exist where fish return specifically for commercial fishermen to catch, there is no natural spawning opportunity, and the fish must be harvested to prevent wastage and straying.

Unfounded Hatchery Criticism

The criticism that Alaska fish hatcheries are over producing chum and, therefore eroding the fish and roe market is unfounded. The volume produced is insignificant compared to world production. Except for a few niche markets, there is no impact. Unfortunately, any attempt to cut back local production will encourage expansion elsewhere. It is not helpful to single out Alaska hatcheries because they are an easy target. What the real problem is that there are too many salmon for today's market and this is being driven by the worldwide farmed salmon production. Whether we like it or not, the farmed salmon are here to stay and we are better served by addressing the real issue of expanding the market and increasing demand. It does no one any service by placing blame on someone else.

Fish Farmer

EDITORIAL

DÉJÀ-VU

HOEVER wrote "déjà-vu rules OK? déjà-vu rules OK?" in an ending sequence all over a wall was probably thinking of the Norwegian salmon marketing dilemma.

After pious pledges to act responsibly, optimistic announcements of sales to the Far East, endless propositions to control marketing, here we are, back to the situation of two years ago, with over-production rampant, prices down, recrimination fromotland, and the Irish Government requesting the imposition of minimum import prices.

On the latter, one is tempted to ask what would have happened if the Irish had not acted, since our own Government adopted its familiar posture of seemingly standing back from European involvement when the protestations were loudest.

The only difference between this occasion and the last appears to be in the scale of tonnage involved. The Norwegian industry seems doggedly set on a production-led course taking it to ever higher realms of absurd statistics where the possible destruction of 40 million smolts can be regarded with equanimity and the goal for the millennium seems to be production of a million tonnes of salmon as some sort of celebration, regardless of whether there is any market for them.

Ironically, the present crisis comes just when the tide of opportunity for fish farming is flowing more strongly than ever before.

At last it is becoming universally recognised that wild fish stocks are a finite resource which cannot be forever plundered, and that the only way to expand fish production is by propagation.

We hear news of a 1,000 tonne order in Scotland for unpigmented salmon, presumably destined to take its place alongside white fish on retail slabs.

This must be the way forward, maximising every market opportunity, competing at every level for a larger share of the market. And there could scarcely be a better time for that than now, when a prime commodity like beef is forced to mention salmon in its adverts.

There will always be a place for a premium product, but there is no room to scorn sales of "ordinary" fish. The big battle, to convince the public that farmed fish is not inferior - indeed, may be superior - to wild fish, was won long ago.

Those few bigoted "purist" chefs who make subjective statements about the superiority of wild fish, show their ignorance and would be hard put to demonstrate their claims in a blind test.

The industry's approach to marketing is infinitely more professional than it once was, and the awareness of quality control is commendable, but it must always beware of aloof attitudes to what it thinks the consumer wants.

Per head consumption of salmon in the UK still runs at pitifully low levels compared with some countries, not necessarily because they have a stronger fish eating tradition. It is an area for study.

Meanwhile, the ridiculous spectacle of the Norwegian industry periodically absorbing vast quantities of livestock, like a dog eating its own tail, must be halted by better planning, free of self-delusion.

Calls for a long-term solution must be turned into realistic, international action, or salmon producers are going to find themselves without a viable, profitable, industry, just when the world needs it.

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Declining wild catches - the spur to farmed production

With the gap created by over-exploitation in 70 per cent of world fisheries, the challenge for farmers is not over-production but adjusting their market viewpoint, suggests Dr MARTIN JAFFA

IN his message to the 1994 Scottish Fish Farming Conference, Raymond Robertson MP, Minister for Fisheries in Scotland, encouraged diversification within the industry. He said that new species of farmed fin-fish, such as halibut, must be brought on.

Mr Robertson should be congratulated for his faith in the industry and his recognition of the need for diversification. This is seen as essential to remove the dependence on salmon farming, which some claim is over-producing. Farming of other species is therefore seen as a way of regaining margin lost through the unrestrained expansion of the salmon industry.

However, there is a much more important reason why the aquaculture industry should diversify. A recent UN report has indicated that 70 per cent of commercial fisheries are now over-exploited or very close to being so. This means that there will be an increasing shortfall in fish for human consumption.

Declining catches from commercial fisheries give fish farmers the opportunity to provide an alternative source of fish. Emphasis must therefore be placed on the development of farmed demersal species, especially those which can be produced in volume to supply the mass markets.

Investigations into the potential for farming marine fish are not new. Research in Europe dates back over 100 years, while elsewhere in the world, extensive marine fish farming has been practised for centuries.

More recent attempts at intensive marine farming have spanned the last 35 years. The driving force behind the work being the White Fish Authority, and its current incarnation, Seafish. The first endeavours were directed at plaice, which was seen as being significant in the traditional markets for fish. However, these early trials identified that the cost of farming the fish could not be recouped from the relatively low price achieved in the marketplace.

To maximise potential profitability, research turned to the Dover sole, at the other extreme of the market. Unfortunately, this fish was so difficult to grow in captivity that trials were abandoned.

Research then turned to another species with a perceived high value: turbot. This fish was identified as one which could be farmed, but before any commercial venture could be established, there were problems with water temperature. The cool waters around the British Isles were too cold for commercial farming, although it was a native fish.

Commercial turbot farms were therefore established in Galicia in Northern Spain, where they have become extremely successful. However, the question of British water

temperatures has been raised again with renewed interest in farming this species here.

Research moved on to halibut, another species considered to have a high market value. Halibut are on the point of commercialisation, with the first farmed halibut being produced in Norway and a number of trial units being established in Scotland. Hence, the encouragement given by Raymond Robertson to halibut farming.

Interestingly, such encouragement has not prompted a rush to establish stand-alone halibut farms, operated by new entrants to the industry. Surely, this would be the case if halibut had shown significant commercial potential, yet no halibut farms have appeared.

Trial units

Instead, a number of salmon farms have established trial units. As part of their five-year strategy, Highlands and Islands Enterprise have encouraged salmon farmers to diversify into halibut farming. Salmon farmers appear to need an alternative activity due to a continued, mistaken, perception that their industry is over-producing.

Against a background of over-exploitation in 70 per cent of world fisheries, can any fish farming industry be over-producing?

The answer depends on the perception of the fish produced. Aquaculture takes one of two forms; the majority of fish are grown in extensive culture, primarily as a source of food; the alternative is intensive culture of high value species, mainly for monetary gain, and is a more recent development. Salmon fall into this category and are seen as the archetypal successful species.

The difficulty for salmon farmers is that any expansion of production seemingly devalues its luxury image. Scottish salmon farmers can either capitalise on the low margins and expand production, but at the same time devalue the image of the fish, or they can cut back production and force up prices, retaining the luxury image.

Unfortunately, there is no choice. Salmon farmers are part of an international community and any attempt to cut back local production will encourage expansion elsewhere. **Salmon farming must continue to expand.**

This new image of a low margin industry has resulted in the idea that margins can be made by growing other types of fish. Hence, the encouragement to farm halibut. The question is whether farming halibut can provide the solution to low margins.

Polyculture is commonplace in extensive pond farming. Salmon and halibut would seem logical potential species for polyculture, with salmon swimming at the surface

and mid-water and halibut on the bottom. However, such a scenario is unlikely, with totally separate growing facilities under development.

The case for separate growing systems is strong. In salmon farming, isolation of individual year classes is necessary to prevent disease, so farmers are unlikely to want to mix species, especially as previous attempts at commercial ventures have been disrupted by serious disease problems.

Salmon farmers are therefore likely to have to develop separate halibut farms. What, then, is the difference between such diversification by salmon farmers and the apparent lack of interest in setting up a stand-alone unit? If independent businesses do not consider halibut farming lucrative, why should salmon farmers?

Part of the explanation can be found in a recent report produced by a fish industry task force. Their investigation into the fisheries industry and its markets advocated caution about involvement in fish farming. They see that the difficulties of the salmon industry should serve as a warning against investment in other forms of aquaculture. The surprising aspect of this report is that representatives of Seafish, the pioneers of marine fish farming, formed a key part of the task force.

Why should those who have been involved in leading the way in marine fish farming, urge caution against its commercialisation? The simple fact is that any attempts to increase the availability of a high value luxury product, will inevitably debase its image, and, more importantly, its price.

The problem for the industry is that it is more focused on production of fish which are believed to have a high monetary reward, than investing in a fish for which there is mass market demand. That is, the intensive aquaculture industry is production-led when it should be market-led.

The industry must therefore be clear about why it should want to farm fish like halibut. Is it for financial gain, or because it believes there is a clear market need?

The idea of significant financial rewards is spurred on by reports of wholesale prices typically at about £5.00/lb, compared with salmon at around £1.35/lb. The potential profit margin therefore looks extremely attractive. But, such figures can be misleading.

One major retail store group currently sells top-of-the-range, prepacked halibut at about £11/lb - almost double wholesale prices, yet local fishmongers regularly supply halibut at £4.25/lb, with some selling Scottish halibut as low as £2.75/lb. Whether

Can farmers fill the wild-catch shortfall?

A small but influential conference in Brussels reached few conclusions but did show the huge gap between fisheries and fish farming, with many interesting statistics

THE enormous chasm which exists between the fisheries and farming sectors was brought home at the Eurofish conference "Increasing Demand V. Diminishing Supply", held during November in Brussels. Organised by Agra Europe in collaboration with FAO European Inland Fisheries Advisory Commission, the conference was chaired by Courtney Hough, General Secretary of the Federation of European Aquaculture Producers.

The aim of this conference was to assess the true wild fish stock situation and then evaluate if Europe's growing aquaculture industry could fill the gaps in supply. What soon became clear was that the development of aquaculture to meet any shortfall in fish catch, is not yet an issue.

The indisputable fact is that stocks of wild fish are under threat. Poul Degnbol of the Danish Institute for Fisheries Research described how most important stocks are exploited above their maximum capacity and how sound management of existing resources is urgently required if total collapse is to be prevented.

He made it clear that fishing pressure must be reduced to protect major high value stocks. Yet, this pressure continues because governments see the fishing industry as an integral part of the economy which must also be protected.

Dr Stephen Cunningham of CEMARE in Portsmouth illustrated the conflict between the protection of fish stocks and the fishing communities with an example from Canada where subsidies, used to maintain the viability of the industry, rose to over \$1 billion in 1991, a figure which actually exceeded the value of the landed catch of \$919 million.

The removal of fishing vessels is therefore seen as a priority. In Norway, for example, a reduction in capacity is viewed as the only way that the fishing industry can remain profitable, yet remove pressure from the fish stocks.

Torstein Hansen of the Norwegian Ministry of Fisheries described a programme involving quotas, licences, and the sale or scrapping of surplus boats. Such programmes, together with increasing co-operation through the EU and other international bodies including the FAO and OECD, could still avert the total collapse of fish stocks.

Against a background of declining fish catches, however, the European demand for fish continues to increase. Speakers described the markets and the consumer demand on both a regional and national basis.

Charles Pecher, managing director of Belgian company Thalassa Seafoods summarized the markets of Northern Europe including the UK. British *per capita* con-

sumption is 20 kg/year, with cod and haddock accounting for 50 per cent of the market. Sales of salmon have pushed this fish to third place. Changes within the retail markets mean that 81 per cent of fish is now sold through the major supermarkets, with frozen prepared dishes gaining increasing acceptance.

This compares with Germany which has a consumption of only 15kg/head/year. The Germans rely on 85 per cent imports to satisfy their needs which is for a wide range of fish. However, in Germany, demand for frozen fish is increasing rapidly.

As a fish processor, Mr Pecher said that he saw aquaculture as the saviour of the seafood market, but he warned that any questions of price, which seemed to affect the fish farming industry, should be avoided by the development of a well defined approach to the market through the sale of value-added products, a point re-enforced later in the conference.

Consumers would clearly eat more fish if

it were available in the form the market wanted. Could aquaculture meet this requirement?

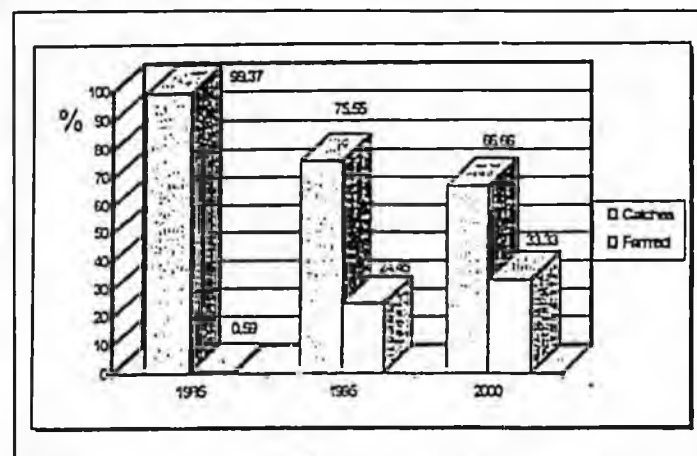
Seven different species were reviewed in all, but three presentations summed up the overall position of the European aquaculture industry. Lars Liabo, of the respected Kontali Analyse consultancy, outlined the potential for salmon.

Mr Liabo's forecast was that salmon production would continue to expand, rising to over 1.2 million tonnes world-wide within the next ten years. He expected the price of production to continue to fall, making salmon even more attractive to the markets.

Referring only to whole salmon, Mr Liabo saw low prices and better quality bringing about an increase in demand from Japan, the US and the EU. Other smaller markets would also be developed.

The pressure on prices, as production continues to expand, was also highlighted by John Stephanis of Selonda Aquaculture, who discussed the future for sea bass and sea bream, and by Sergio Devesa of Prodemar

FARMED TURBOT AS PERCENTAGE OF TOTAL CONSUMPTION (CATCHES & FARMED)



This graph shows the growing proportion of cultured turbot in Europe noted by Sergio Devesa of Prodemar SA, Spain. Production tonnages went from 50 tonnes in 1986 (10t from France and 40t from Spain) to 2,912t in 1995 (700t from France and 2,010t from Spain) with the balance - in descending order of importance - coming from Portugal, Norway, Denmark, Holland and Germany.

POSSIBLE DEVELOPMENT IN MAIN SALMON MARKETS

	1990	1995	1,000 tons round weight 5-10 years ahead
Japan	480	530	600
EU	245	360	600
US	140	250	450
Russia	100	130	120
Canada	60	70	70
Other markets	25	60	160
Total	1,050	1,400	2,000

World supply of farmed Atlantic and Pacific salmon could reach 1.2 million tonnes in 5-10 years (555,000 in 1995) predicts Lars Liabo of Kontali Analyse AS Norway. With a wild catch of 800,000 (875,000t in 1995) total supply would be 2 million tonnes. This graph shows the market to be supplied.

1995 production estimate of about 260,000 tons. While initial marketing targeted the fresh salmon market, the rapid increase in production volume forced the producers to begin freezing salmon to allow more time for marketing.

Over the years, the Norwegian farmers have made considerable advances in fry development, cutting costs, improvement in feed and disease prevention. Originally, it took 12 months to rear fry to a size of 70 to 80 grams. The current technology has shortened the length of time required to achieve this size by about one-half. They have also been able to reduce the amount of feed needed to raise a one kilo fish from 2 kilos of feed to around 1.1 to 1.2 kilos of feed. With improvements in processing and distribution, and resulting lower costs, the Norwegians have been able to greatly expand their market in Europe.

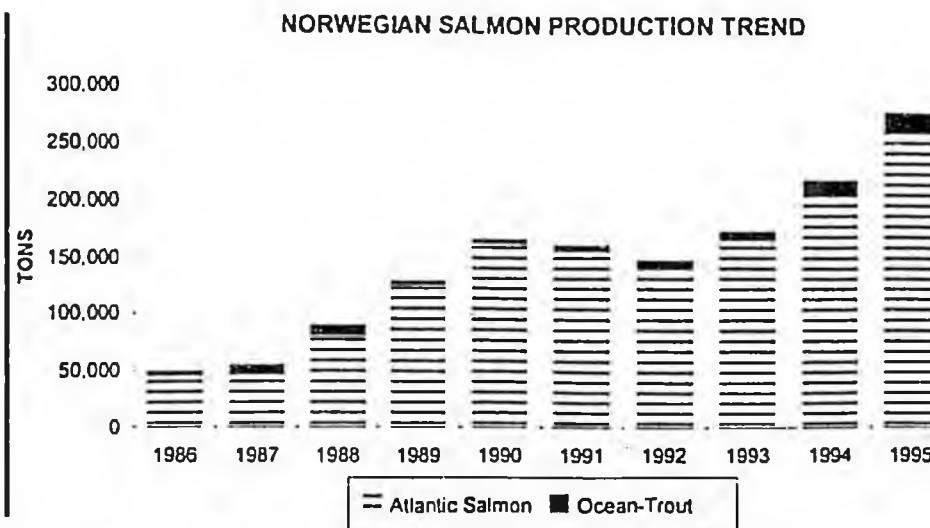
There is a definite oversupply of salmon on the world market. With weaker prices and charges of "dumping" from members of the European Union (EU), the Norwegian producers are under considerable pressure to reduce their production of farmed salmon. The Norwegian government will be monitoring the salmon market conditions, and the effect of the "stop feeding program" on prices. If the situation hasn't improved sufficiently, the government is reportedly prepared to continue the program. At this point, the 1996 production figures are placed somewhere between 300,000 and 360,000 tons, although continued strong opposition to increases in Norwegian production from other producer nations are expected.

The Norwegian coastline is 2,650 kilometers (1,656 miles) long. There are no limitations on the number of farmers, as long as the companies or groups follow government regulations related to the rearing of farmed salmon. Norway apparently has the capability of increasing their overall farmed salmon production to a level around one million tons (round weight) by the year 2005. (January 14, 1996)

NORWEGIAN SALMON PRODUCTION TREND

YEAR	ATLANTIC SALMON	TROUT
1986	45,000	4,250
1987	46,000	9,000
1988	80,000	9,500
1989	125,000	3,900
1990	162,000	3,300
1991	155,000	6,000
1992	140,000	7,500
1993	165,000	8,000
1994	203,000	14,000
1995	260,000	16,000

Unit: Metric tons



Chilean Coho

The Chilean farmed salmon producers have projected a total coho production of 40,000 tons for the 1995/96 season. According to reports from Japanese who visited Chile in December, the weather and water conditions are apparently excellent this year, and the fish are growing well. Initial harvest plans were based on the following schedule: December 8,000 tons; January and February 15,000 tons each; and March 2,000 tons. Actual harvest volume and shipments have been delayed somewhat, however, due to problems in reaching a purchase price agreement. Such delays in harvesting the coho will only result in a further increase in the total tonnage produced, however, due to a longer growth period for a portion of the fish.

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MEMORANDUM

April 22, 1996

SUBJECT: Proposed regulations relating to use and waste of salmon
(Work Order No. 9-LS1865)

TO: Representative Bill Williams
Attn: Cheryl Sutton

FROM: George Utermohle *GU*
Legislative Counsel

You have asked whether the Department of Fish and Game has authority to adopt regulations to implement and interpret AS 16.05.831 which prohibits the waste of salmon. The proposal for the adoption of regulations addresses interpretation of AS 16.05.831, authorization for hatcheries to discard salmon carcasses, and use of salmon as bait. This memorandum addresses the regulation making authority of the department in the context of the proposed interpretation of AS 16.05.831 and authorization for hatcheries to discard salmon carcasses.

Though AS 16.05.831, particularly subsection (b), is in need of interpretation, it is not clear that the Department of Fish and Game has the authority to adopt regulations regarding waste of salmon.

The courts will narrowly interpret a statute as to whether it grants an agency the discretion to adopt regulations. Warner v. State, 819 P.2d 28 (Alaska 1991); McDaniel v. Cory, 631 P.2d 82 (Alaska 1981). Neither of the sections cited as authority for the adoption of the proposed regulations (AS 16.05.020 and 16.05.831) expressly authorizes the department or the commissioner to adopt regulations. AS 16.05.020 is frequently cited by the department as authority for adopting regulations, however that statute does not mention regulations. AS 16.05.020 states:

FUNCTIONS OF COMMISSIONER. The commissioner shall

- (1) supervise and control the department, and may appoint and employ division heads, enforcement agents, and the technical, clerical, and other assistants necessary for the general administration of the department;
- (2) manage, protect, maintain, improve, and extend the fish, game and aquatic plant resources of the state in the interest of the economy and general well-being of the state;

Representative Bill Williams

April 22, 1996

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(3) have necessary power to accomplish the foregoing including, but not limited to, the power to delegate authority to subordinate officers and employees of the department.

Likewise, AS 16.05.831 does not expressly authorize the commissioner or department to adopt regulations regarding waste of salmon. The text of AS 16.05.831 does suggest that some regulations are anticipated to be adopted under that statute, but the references are oblique. Under AS 16.05.831(c), "[a] person who violates this section or a regulation adopted under it is punishable by a fine of not more than \$10,000, or by imprisonment for not more than six months, or by both. . . ." Clearly the legislature envisioned that regulations may be adopted under AS 16.05.831, but the legislature failed to expressly grant such authority. Under AS 16.05.831(b), "The commissioner, upon request, may authorize other uses of salmon that would be consistent with maximum and wise use of the resource." To the extent that the commissioner exercises the authority conferred by AS 16.05.831(b), that authority would have to be exercised by regulation, because the Administrative Procedure Act (APA) requires that every rule, regulation, or order, and policies, interpretations, and the like that have the effect of a rule, regulation, or order must be adopted as a regulation in accordance with the APA. The APA, itself, does not provide authority for the adoption of regulations.

Despite the lack of express authority to adopt regulations under AS 16.05.831, it is possible to conclude that the department has implied authority to adopt at least some regulations regarding waste of salmon. The Department of Law has, in the past, concluded that the department has authority to adopt regulations such as the proposed regulations.

In the absence of a broad grant of authority to adopt regulations, the agency must have at least authority to adopt the regulation in question. The need to interpret a statute in order to implement it is not sufficient authority for the adoption of regulations. Warner, 819 P.2d at 32.

Assuming for purposes of argument that the department may adopt at least certain regulations under AS 16.05.831, it is not clear that the proposed regulation regarding discarding of salmon carcasses from hatchery fish is within the scope of permissible regulations under AS 16.05.831. AS 16.05.831(a), in unambiguous terms, states that "[a] person may not waste salmon intentionally, knowingly, or with reckless disregard for the consequences" and then proceeds to define waste as "the failure to utilize the majority of the carcass, excluding viscera and sex parts, of a salmon . . ." However, the proposed regulation authorizing the discarding of salmon carcasses expressly authorizes that the majority of the salmon carcass may be thrown away and not utilized. The proposed regulation seems to directly contradict AS 16.05.831(a). The department may not adopt a regulation that conflicts with any state statute.

Representative Bill Williams

April 22, 1996

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The only basis for adoption of the proposed regulations, in light of AS 16.05.831(a), is that it is somehow authorized under AS 16.05.831(b), e.g. "The commissioner, upon request, may authorize other uses of salmon that would be consistent with maximum and wise use of the resource." In the context of the whole section, AS 16.05.831(b) is ambiguous in that it is not clear how it is to relate to subsection (a). AS 16.05.831(a) does not state that its application is subject to provisions of subsection (b). And AS 16.05.831(b) does not state that it is meant to supersede subsection (a). The commissioner may authorize "other uses of salmon" under AS 16.05.831(b), but the remainder of the section does not refer to uses of salmon.

In order for the proposed regulations to be valid under AS 16.05.831(b), it is necessary to reach the conclusion that the subsection authorizes the commissioner to grant exemptions from the application of AS 16.05.831(a). Such a conclusion is not wholly unreasonable or without a basis, but it does require an expansive construction of the language of AS 16.05.831(b). The burden will fall upon the department to justify its interpretation of AS 16.05.831, if the proposed regulations should take effect and be challenged.

In conclusion, though the language of AS 16.05.020 and 16.05.831 does not expressly provide authority to adopt regulations and does not seem to contemplate the adoption of regulations permitting the discarding of salmon carcasses, it is possible that a court would give an expansive construction to those statutes and find that the commissioner/department has authority to adopt the proposed regulations. However, such a result is not certain.

The foregoing discussion highlights the need for AS 16.05.831 to be rewritten in order to clearly set out what uses of salmon are permitted.

If I may be of further assistance, please advise.

GU:glc:klb

96-242.glc

FW 205

1996

[Faint handwritten notes and signatures]

House 2/4/94
Journal

HB 448

HOUSE BILL NO. 448 by the House Rules Committee by request of the Governor, entitled:

"An Act relating to waste and use of salmon and parts of salmon;

relating to permits for and operation of a salmon hatchery; and providing for an effective date."

HB 448

was read the first time and referred to the House Special Committee on Fisheries, Resources and Judiciary Committees.

The following fiscal note applies:

Zero fiscal note, Dept. of Fish & Game, 2/4/94

The Governor's transmittal letter, dated February 4, 1994, appears below:

"Dear Speaker Barnes:

Under authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill relating to the waste and use of salmon and parts of salmon, and to permits for and operation of salmon hatcheries.

The bill would repeal and reenact AS16.05.831 (waste of salmon) to authorize the commissioner of fish and game to issue permits to allow the removal and sale of eggs from hatchery-produced salmon and discard of the salmon carcasses. The permits would allow this practice only for salmon that return to hatchery terminal and special harvest areas or remote sites from which hatchery smolt are released, and that are determined by the commissioner of fish and game to be unfit for human consumption. This is a practice that is prohibited by existing AS16.05.831. It is anticipated that persons who would be authorized under such a permit are commercial fishermen who are participating in a designated terminal fishery and, perhaps, hatchery operators or fish processors.

The language that appears in the bill as AS16.05.831(b)(2), regarding permits authorizing "other uses of salmon," is currently contained in AS16.05.831(b).

The bill also cures several problems in existing AS16.05.831.

Presently, that statute applies only to salmon that are "intended" for certain uses. Because that statute does not indicate whose intent is to

HB 448

be measured, this ambiguity can cause enforcement problems. Also, the specified uses are not meaningful because they cover every conceivable use of salmon. The bill's repeal and reenactment of AS16.05.831 deletes this problematic language from the law.

Because of present market conditions, it is important for the fishing industry and hatchery operators to be able to recover as much value as possible from salmon resources. The bill will contribute to this goal and, at the same time, will allow the state to more effectively enforce the statute on waste of salmon. For these reasons, I urge your prompt consideration and passage of the bill.

4/6/94

CONSIDERATION OF THE DAILY CALENDAR
SECOND READING OF HOUSE BILLS
HB 448

The following was read the second time:

HOUSE BILL NO. 448

"An Act relating to waste and use of salmon and parts of salmon;

relating to permits for and operation of a salmon hatchery; and
providing for an effective date."

with the: Journal Page

FSH RPT CS(FSH) 2DP 1NR	2475
-PREVIOUS ZERO FISCAL NOTE (F&G) 2/4/94	2476
RES RPT CS(RES) 6DP	2677
-PREVIOUS ZERO FISCAL NOTE (F&G) 2/4/94	2677
JUD REFERRAL WAIVED	2884

Representative Phillips moved and asked unanimous consent that the
following committee substitute be adopted in lieu of the original bill:

CS FOR HOUSE BILL NO. 448(RES)

(same title)

HB 448

There being no objection, it was so ordered.

Representative Phillips moved and asked unanimous consent that
CSHB 448(RES) be considered engrossed, advanced to third reading
and placed on final passage. There being no objection, it was so
ordered.

CSHB 448(RES) was read the third time.

**The presence of Representative Menard was noted.

The question being: "Shall CSHB 448(RES) pass the House?" The
roll was taken with the following result:

CSHB 448(RES)

Third Reading

Final Passage

YEAS: 37 NAYS: 1 EXCUSED: 1 ABSENT: 1

Yeas: Barnes, Brice, Brown, Bunde, Carney, Davies, B.Davis,
G.Davis, Finkelstein, Foster, Green, Grussendorf, Hanley, Hoffman,
Hudson, James, Kott, Larson, Mackie, MacLean, Martin, Menard,
Moscs, Mulder, Nordlund, Olberg, Parnell, Phillips, Porter, Sanders,
Sitton, Therriault, Toohey, Ulmer, Vezey, Williams, Willis

Nays: Davidson

Excused: Navarre

Absent: Nicholia

And so, CSHB 448(RES) passed the House.

Representative Phillips moved and asked unanimous consent that the roll call on the passage of the bill be considered the roll call on the effective date clause. There being no objection, it was so ordered.

HB 448 - Waste & Use Of Salmon; Hatcheries

CHAIRMAN WILLIAMS advised there is a draft committee substitute in committee members folders which adds two words that were unintentionally omitted from the Fisheries Committee CS when it was amended in that committee.

GERON BRUCE, LEGISLATIVE LIAISON, ALASKA DEPARTMENT OF FISH AND GAME (ADF&G), said on page 3, line 12, the words "from wild stock" were left out of the Fisheries Committee version. This language is to carry forward the original intent of this section of the statute, which was to ensure that when hatcheries are being established and eggs are being taken from wild stock, there is some balance between the sustained yield needs of the wild stock, the hatchery egg takes, and the opportunities of the common property users to continue to harvest those resources. Once the eggs are in the hatcheries, the hatchery has established its own brood stock and is operating off of its own brood stock, it is a different situation. This language was to clarify the original intent.

MR. BRUCE stated HB 448 provides for an exemption to the statutory requirement that the carcass of a salmon be utilized when it is harvested. He explained the hatchery program begins with the most important decision made in hatchery development, which is the siting of the hatchery.

When a hatchery is given a permit by ADF&G, two things are looked at when siting the facility. First, the hatchery is sited in a location where it will contribute significantly to the common property fisheries. These are fisheries which are mixed in nature and are composed of a number of wild stocks. Once the hatchery is on-line, the hatchery stocks will also be present in that fishery. The second consideration is that the hatchery has a terminal harvest area relatively free of wild stock so the hatchery operator or fishermen operating in the area can go in and harvest the hatchery's run completely without jeopardizing the sustained yield of any wild stock.

Number 240

MR. BRUCE said in managing the harvests of hatchery stocks as they pass through the mixed wild stock/common property fisheries, the hatchery harvests have to be restricted to

the level at which the wild stocks will support. A certain percentage of the hatchery run has to get back to the hatchery to provide brood stock for subsequent returns and also to provide cost recovery to the hatchery operator. He stressed in the private nonprofit hatchery programs, the major premise of the program is that a significant portion of the costs of the program will be covered by the harvest of returning fish produced by the hatchery.

MR. BRUCE pointed out that in most situations, approximately 60 percent of the hatchery returns statewide are harvested in common property fisheries by commercial, sport, and personal use fishermen. In many cases, a high percentage of the fish returning to the terminal harvest area are suitable for utilization in some manner. However, at a certain point in the run, the salmon deteriorate to the point they are not suitable for value-added products. He said it is important to consider the biology of salmon.

MR. BRUCE stated as salmon return to fresh water and get ready to spawn, they stop feeding and begin consuming their stored body fats and proteins for their own survival and for conversion into roe. The animal is headed for death, it is consuming its own energy sources for other purposes and consequently reduces the value of the flesh. He stressed at some point the fish becomes unsuitable. It is not unwholesome. A person could eat it, but very few people do because it is very mushy, has no color, etc.

MR. BRUCE explained in order to more fully utilize the returns coming back to the hatcheries, both for the seafood industry and the hatchery operators, and in trying to recover all of the revenue which can be received from the returns, HB 448 will provide an exemption for the tail end of the run when the fish are not suitable for any other purpose, but still contain a valuable product. He noted that salmon roe is an extremely valuable product. In 1993, the value of frozen red salmon exported from Alaska was \$627.5 million and the value of salmon roe was \$177 million.

He added that roe has steadily been increasing in value over the last five years.

REPRESENTATIVE MULDER asked if that was value of the salmon roe exported or just the value of salmon roe to the hatcheries.

MR. BRUCE replied the figure is for the salmon roe exported as a finished product.

Number 311

MR. BRUCE continued that the exemption in HB 448 is permissive and has to be applied for, it is not automatically granted. In order to receive the permit, three criteria will need to be met: 1) the fish will have to be demonstrated to be from a hatchery program; 2) the fish will have to have returned to a terminal area; and 3) they will have to be determined by the commissioner of ADF&G to be unsuitable for human consumption. Once the three criteria are satisfied, the commissioner can issue a permit allowing the taking of salmon in a specific area for the harvest of roe and the carcasses will be discarded in accordance with the Department of Environmental Conservation's (DEC) requirements.

MR. BRUCE said many people ask the question, how does this fit with other state policies regarding the harvest of roe and the discard of carcasses. He stated most people are aware of the controversy on pollack roe stripping which occurred in the North Pacific by factory trawlers. He said there are several differences which are a basis for distinguishing between the two issues. Salmon returning to hatcheries are not part of the biological basis for sustained yield. They are not needed for spawning, they are supplemental production, and they are intended by the producers and the state to be totally utilized for either common property harvest, brood stock, or cost recovery.

MR. BRUCE explained salmon are within a week or two of dying. If HB 448 is not in place to allow salmon to be harvested for their roe, they will die with the roe still in them, they will not spawn successfully, they will not contribute at all to a sustained yield and a very valuable byproduct will go unutilized. He said another difference is that pollack are not going to die upon spawning, pollack are not nearing death, and pollack flesh does not deteriorate to the point that the quality is such that people would not want to eat it. In the case of pollack, it is an economic decision. The market value of the flesh is low enough that factory trawlers chose not to process it because the cost of producing the product exceeded the price they could get in

the market for it. That is not the case with salmon. He stressed the salmon being discussed have zero value in the marketplace and are not desirable.

MR. BRUCE stated the public and private players in the private nonprofit salmon program have significant investments in salmon. In many cases, the hatcheries are operating under loans from the state, the fishermen are paying a salmon enhancement tax in many areas of the state to support the hatcheries, there are significant private and public investments which have been made to produce these fish and its wise management to try to recover all possible revenue from returning fish, especially if there is no reason not to.

MR. BRUCE gave an example of a situation which could have been bettered if HB 448 had been in place. Runs come in, a significant percentage is harvested in the common property fishery and the remainder in the terminal area are cleaned up without getting below the threshold. He noted there are circumstances in which either the runs behave unusually or in the case of a very large run, the process or capacity gets plugged and the process is not able to get to the fish, so the fish sit in the water in the terminal area and deteriorate. He stressed in that case, a matter of a few days makes a significant difference.

Number 385

MR. BRUCE described the situation which occurred in Prince William Sound in 1991. The Prince William Sound Aquaculture Association had to get a permit from ADF&G to dump three million pounds of pink salmon out in the open Sound because those fish came into the terminal harvest area, deteriorated in quality, there was no market for them, the processors were unable to get to them, and therefore the fish were dumped. He stressed no value was recovered from the fish whatsoever, and pointed out that if HB 448 had been in place, the Aquaculture Association would have been able to recover the value of the roe which would have paid the costs for dumping them with money probably left over. As it was, the state paid the costs of dumping the fish. The circumstances which led to the dumping of the fish were that in 1991, for some reason the pink salmon held off very late in entering the Sound and when they did enter, it was a very large run, there were low wild stocks, there was limited

opportunity to fish in the mixed common property areas, and a very large number of fish returned to the terminal area and swamped everything.

Number 415

REPRESENTATIVE CARNEY asked why was it more of a crime to take the roe before the fish were dumped than it was just to dump the fish.

MR. BRUCE replied it would have been the most desirable circumstance to have harvested the fish and utilized the carcass and the roe. In this instance, that was not possible because of the circumstances surrounding that year's return. It would have been less of a crime in the sense, that at least some value could have been extracted from the fish.

REPRESENTATIVE CARNEY said Mr. Bruce was still not answering his question. He asked if it was legal to dump fish.

MR. BRUCE replied a permit is required. He said the fish were taken out to the Sound to dump because in a shallow bay, if all of those fish would have been allowed to die, they would have caused significant environmental problems.

REPRESENTATIVE CARNEY asked why were the roe not taken before the fish were dumped.

MR. BRUCE replied it would have been illegal. There is no provision in statute to allow for the removal of the roe if the carcass was not utilized. In current law, the carcass has to be utilized in some way.

REPRESENTATIVE CARNEY said a permit was issued from the commissioner to dump the fish and asked if the commissioner could have also given permission to take the roe.

MR. BRUCE said not without the law being proposed.

Number 471

REPRESENTATIVE MULDER stated it would seem like the commissioner would have the authority under emergency regulation to be able to issue that kind of permit.

MR. BRUCE replied the commissioner might have been able to stretch his discretionary authority in the law, but it would have been an unusual call and one which would have not been subject to policy approval through the legislative body.

REPRESENTATIVE MULDER asked if ADF&G has explored options to try and limit bycatch or incidental catch.

MR. BRUCE responded yes in specific fisheries, the department has made efforts to do that. He noted the fisheries having the most excessive discard are not managed by the department. Therefore, the role of the department is to try and influence the federal managers to take action.

REPRESENTATIVE HUDSON asked what is the value to be derived from extracting roe from salmon.

MR. BRUCE stated he did not know because there is nothing to base the figure on, except what egg sales have taken place in hatcheries as a result of and ancillary to the utilization of a portion of the brood stock they do not need. In 1993, the sales were less than \$500,000 statewide.

He said the roe market is very large and healthy and he guessed the figure would probably be in the tens of millions of dollars. He added that a hatchery might have a one million dollar budget and if it can recover an extra \$200,000, it is a very significant percentage of its total costs.

Number 547

REPRESENTATIVE FINKELSTEIN felt HB 448 is a good bill. He said there has been use of carcasses and mentioned a nonprofit agency which has received funding to distribute excess carcasses to get them into the hands of poor people.

He asked if there is any way to require hatcheries, without cost to them, to make the carcasses available.

MR. BRUCE stated there is a market incentive to do that already, because there is a cost associated with disposing of the carcasses. Hatcheries have to conform with DEC requirements which require carcasses to be either ground and disposed of or transported out to deep water. He pointed out that if someone is willing to come to the hatchery door

and take the carcasses, the hatchery avoids a cost.

REPRESENTATIVE FINKELSTEIN commented there is also some disincentive because the hatcheries might not want to put inferior salmon out into the market for fear of hurting their reputation.

REPRESENTATIVE DAVIES asked what the original purpose in the law was in preventing the taking of eggs. He wondered if it was to eliminate the situation where people destroy fish just for the roe.

MR. BRUCE said he cannot answer the question. He stated the roe market is a recent development and he did not know what date the statute originates. He said he would research the answer and get back to the committee.

REPRESENTATIVE BUNDE said hatcheries in Unalakeet just break even on processing the flesh and make their money on the eggs. He noted there are unsubstantiated rumors that people along the Yukon catch fish, throw the fish away, keep the eggs and make \$125 a pound. He asked if there is any danger that the rumored egg take could be legitimized through HB 448.

MR. BRUCE replied there is an existing roe fishery on the Yukon River which is in a specific drainage. Under current law, people are required to utilize the carcass in some way and it is usually dried. He said ADF&G's best information is that compliance with the law is good there and no significant abuse is occurring. He explained there is an authorized roe fishery and it is operated under a guideline harvest by the department. There are so many pounds of roe which are allowed to be harvested under that fishery and it is managed on a sustained yield basis. He stressed that is a different situation than what HB 448 will authorize because HB 448 involves hatchery fish and the utilization of the carcass is not required.

MR. BRUCE said there have also been reports of salmon being harvested by subsistence users and the roe being sold. He stated there have been arrests and convictions.

TAPE 94-27, SIDE A
Number 000

RAY GILLESPIE, REPRESENTATIVE, ASSOCIATION OF AQUACULTURE ASSOCIATIONS, expressed all four organizations he represents support HB 448 and the proposed amendment.

DON AMEND, REPRESENTATIVE, SOUTHERN SOUTHEAST REGIONAL AQUACULTURE ASSOCIATION (SSRAA), testified via teleconference and stated SSRAA supports HB 448. He noted there have been instances where fish have had to be dumped without being able to recover some of the value in the form of eggs.

Number 039

TOM MEARS, EXECUTIVE DIRECTOR, COOK INLET AQUACULTURE ASSOCIATION (CIAA), testified via teleconference and stated CIAA supports HB 448. Extracting some value from otherwise low grade fish is a good idea. In answer to a question asked earlier regarding CIAA's current position of refusing to provide fish for the free salmon giveaways, CIAA chooses not to participate based on the advice of legal counsel. He stated CIAA has letters in their files from state and federal regulatory agencies telling them that brood stock taken in remote hatcheries are unfit for human consumption.

He explained CIAA's lawyers worry about the legal liability of giving away something which is unfit for human consumption even though there is a law in place which might protect or exempt them when giving fish to a food bank.

REPRESENTATIVE FINKELSTEIN asked if there is a law in place which addresses a hatchery's liability in giving away fish.

MR. MEARS responded there is a current law which allows for a general exemption from liability for people who give food to a food bank. However, he is not sure how the Association would defend themselves when they knowingly gave away fish which were deemed to be unfit for human consumption.

REPRESENTATIVE FINKELSTEIN said he would do some research to determine if there is any way to resolve that issue. If the legislature is going to allow the taking of the valuable part of the fish, he felt the carcasses should also be made available to serve a public interest.

MR. MEARS said CIAA would be happy to make fish available if they could be assured there will be no legal repercussions

to them.

REPRESENTATIVE DAVIES said earlier testimony indicated there is a difference in the quality of fish as the run progresses. He asked Mr. Mears to comment on that statement.

MR. MEARS replied that at most facilities, fish early in the run are in excellent condition and can be marketed on the value of their flesh quality. As time passes, particularly in the last ten percent of fish coming in, the flesh has little or no value, but eggs may provide an opportunity to still get value.

REPRESENTATIVE DAVIES clarified the only concern of CIAA for giving fish away is the legal circumstance that somehow fish are defined as unfit, whereas it may be that some of the fish are fit for human consumption.

MR. MEARS stated fish harvested in the round and taken off to a processor are always deemed fit for human consumption.

He said the specific incidence he is referring to is fish which are in a normal course of events at a hatchery, collected for brood stock, and eggs are collected for the spawning process. Those fish, because they are cut open in conditions not approved by DEC nor can be approved, are by definition adulterated and by definition are unfit for human consumption.

Number 116

PETE ESQUIRO, REPRESENTATIVE, NORTHERN SOUTHEAST REGIONAL AQUACULTURE ASSOCIATION (NSRAA), testified via teleconference and expressed support of HB 448. He stated NSRAA still sees its mission as trying to harvest the highest quality fish possible and the committee should note that fish being discussed in HB 448 are fish NSRAA cannot make fit into the high quality category. He felt as HB 448 is approved and implemented, it is important for the commissioner to meet with representatives of the industry who can help in defining unsuitable for human consumption.

He thought that definition is a critical element.

REPRESENTATIVE HUDSON asked Mr. Esquiro what the approximate

value of what is being wasted in his region by not being able to harvest the eggs.

MR. ESQUIRO replied last year, NSRAA marketed \$160,000 worth of surplus eggs. He said the eggs resulted primarily from overestimates made in the available brood stock.

REPRESENTATIVE BUNDE asked if there is an assumption being made that there is an unlimited market for eggs, because eggs taken at the hatchery level compete with eggs available from privately caught fish.

MR. ESQUIRO stated over the next few years, a better estimate of the egg market will be determined. He said many of the eggs NSRAA sold this past year were used to produce trout bait.

REPRESENTATIVE BUNDE noted there are different qualities of eggs taken at different times and stated his concern is the possibility of over supplying the market and destroying the already low price of salmon.

REPRESENTATIVE HUDSON felt the market has not been saturated and the market capacity is there.

DONALD TAYLOR, VALDEZ, testified via teleconference and stated he is working with hatcheries in his area to develop byproducts utilizing carcasses. He stressed timing and correct handling in the taking of eggs is very critical. He expressed support of HB 448.

LAWRENCE MCCUBBINS, HOMER, testified via teleconference and expressed support for HB 448. He referred to lines 16 and 17 on page 4, "rearing and sale of ornamental finfish for aquariums or ornamental ponds provided that the fish are not reared in or released..." and asked if fish are not to be reared in state waters, what kind of waters will the fish be reared in.

REPRESENTATIVE FINKELSTEIN said that is a section of existing law and is not affected by HB 448.

MR. MCCUBBINS asked if fish can be reared or cannot be reared.

REPRESENTATIVE FINKELSTEIN responded it is not a part of HB

448 and the reason it is stated because the part which is amended is in the same section. He said ornamental fish can be reared in ponds or aquariums.

MR. MCCUBBINS stated it reads "not reared in". He commented on the issue of permit and asked if that permit is issued by the area biologist or does it go to the commissioner. If it goes to the commissioner, he wondered what the timetable is.

MR. BRUCE responded the power can be delegated by the commissioner. ADF&G anticipates that if HB 448 passes, a group representing hatchery operators, processors, fishermen, etc., will be formed for the purpose of developing procedures for the implementation of HB 448. He stressed ADF&G does recognize there is a time factor and there will be a need for a balance between controlling the situation and being able to react quickly to circumstances as they develop.

MR. MCCUBBINS noted the word "identify" was mentioned and asked how fish will be identified.

MR. BRUCE replied fish in a terminal harvest area will be identified by their location and the trigger at which point the fish are deemed unsuitable. He said the Alaska Seafood Marketing Institute has developed a color chart showing the stages which salmon go through as they go from ocean to a fully water marked fish and at some location in that chain, a certain point can be selected to be the trigger.

MR. MCCUBBINS said his specific question is will the deviation between wild stock and hatchery stock be identified.

MR. BRUCE stated HB 448 only applies to hatchery stock and those fish are identified by the fact they have returned to a terminal hatchery area. HB 448 will not necessarily require all hatchery fish be marked although it is the department's preference that there is some method of identifying hatchery fish.

Number 320

REPRESENTATIVE MULDER made a MOTION to ADOPT CSHB 448(RES).

CHAIRMAN WILLIAMS asked if there were any objections.

Hearing none, the MOTION PASSED.

REPRESENTATIVE MULDER made a MOTION to MOVE CSHB 448(RES) with zero fiscal notes out of committee with INDIVIDUAL RECOMMENDATIONS.

CHAIRMAN WILLIAMS asked if there were any objections.

Hearing none, the MOTION PASSED.