


MEMORANDUM

TO: Council, AP, and SSC Members

FROM: Clarence G. Pautzke   
Executive Director

DATE: June 17, 1993

SUBJECT: Groundfish Regulatory Amendments, Final Review

ESTIMATED TIME

7.0 HOURS

**ACTION REQUIRED**

- (a) Final decision on requiring total weight measurement of CDQ fisheries. (2 hours)
- (b) Consider recommending additional releases of Atka mackerel TAC in the newly created Aleutian sub-districts. (1 hour)
- (c) Final decision on the proposal to framework the opening date for the BSAI pollock "A" season. (4 hours)

**BACKGROUND**

Total Weight Measurement

In January 1992, the Council recommended that NMFS develop a regulatory amendment that would require accurate estimation and reporting of total catch by species for all groundfish fisheries within the Exclusive Economic Zone (EEZ) of the GOA and BSAI. Reasons for accurate measurement of total catch include the following: (1) improve information about total removals from groundfish stocks, (2) improve in-season management of groundfish total allowable catches (TAC) and other species bycatch, (3) improve the effectiveness of the Vessel Incentive Program (VIP), and (4) improve data used to prepare stock assessments.

At the April meeting, NMFS staff presented a draft analysis of a regulatory amendment to require improved total catch measurement by processors participating in the Western Alaska Community Development Quota (CDQ) pollock fisheries. Alternatives considered in the analysis include:

- Alternative 1: No Action. The pollock CDQ fisheries will continue to be managed with one observer and no requirements for processors to provide specific equipment to improve total catch estimation.
- Alternative 2: Two observers and certified bins. This alternative will require all processors participating in the pollock CDQ fisheries to have two observers. In addition, all processors must provide, at a minimum, certified receiving bins accessible to observers for use in volumetric estimates of total catch.

Alternative 3: Two observers and certified scales. In addition to requiring two observers, all CDQ processors must provide certified, secure and tamper-proof scales to weigh all fish prior to sorting and discard. Observers must be allowed access to the scales and must be able to periodically verify the accuracy of the scales.

After receiving public testimony, the Council can take final action by recommending a preferred alternative. This will allow adequate time for Secretarial review, and have the proposed measure implemented prior to the start of the 1994 pollock CDQ fisheries. One written comment was received, from Marel, makers of in-line scales, and is attached as Item D-3(a) Supplemental. Staff will have available for review draft regulations for Alternatives 2 and 3. These draft regulations will indicate how NMFS plans to implement this proposed amendment.

#### Atka Mackerel TAC Release

At the January 1993 meeting, the Council approved a plan amendment that subdivides the Aleutian Islands management area (540) into three smaller management areas. This change to the BSAI FMP allows the Council to assign TACs to more finite areas within the Aleutian Islands management area during the September-December specifications process. This will allow the Council to establish TACs that are better reflective of the actual biomass distributions, and in so doing, reduce the chance of local depletion of sedentary fish stocks. The three areas within Area 540 will be separated at the 177°E and 177°W Longitudes.

The status of the review of this amendment is NMFS Central Office has recently approved the Alaska Regional Office's decision memo, thus the publication of the Final Rule will occur shortly. Day 95 of NMFS' review will be July 6, 1993. Assuming the regulations are filed by day 110, (July 20), and a 30-day cooling off period is considered, this amendment will be in place by August 20, 1993.

When recommending this amendment in January, the Council stated its intent to consider the release of Atka mackerel TAC from the unspecified reserve at the June 1993 Council meeting. To date, 37,769 mt of Atka mackerel has been caught in the BSAI, almost all from the proposed Eastern AI District. The Council established an ABC for Atka mackerel of 117,100 mt, and a TAC of 32,000 mt.

At this meeting, the Council can recommend to the Regional Director whether to release an amount of Atka mackerel TAC from the operating reserve into the three new areas and when this amount should be made available to the fishery. In light of this, Item D-3(b)(1) is a letter from the NMFS Alaska Region stating its recommendation on a release from the reserve of Atka mackerel TAC. Also attached as Item D-3(b)(2) is a chartlet of the new AI areas.

#### BSAI "A" Season Start Date

At the January 1993 meeting, the Council requested development of a framework amendment which would allow the opening date for the BSAI pollock 'A' season to be set during the September-December annual specifications process. This flexibility would allow for the setting of the date annually to ensure maximum benefit from the 'A' season pollock harvest.

A discussion paper and detailed outline of the amendment package were presented at the April meeting. The Council reaffirmed its desire to have the analysis finalized and sent out for review prior to the June meeting.

The common property nature of the Bering Sea pollock fisheries has resulted in increased competition for the pollock resource and shorter seasons. Shortened seasons can result in foregone revenues to one or more sectors of the Bering Sea pollock fishery if pollock harvests occur before or after the period when roe maturity is at the highest market quality. Peak roe maturity appears to occur about the third week of February, however, with a January 20 opening date and shorter seasons, the majority of the pollock 'A' season harvest quota may be taken before the peak of roe maturity, thereby reducing the overall value of the fishery to processors.

The objective of the proposed action is to increase the gross wholesale value of the BSAI pollock 'A' season by changing the timing of the fishery to coincide more with peak roe maturity while minimizing preemption of other groundfish fisheries. The proposed action would amend existing BSAI groundfish fishery regulations.

Alternatives considered in the analysis include the following:

Alternative 1: No action (status quo alternative). All 'A' season pollock fisheries (inshore component, offshore component, and CDQ pollock fisheries) are authorized to start on January 20 and end when the 'A' season pollock quota apportioned to each fishery is reached, or April 15, whichever occurs first.

Alternative 2: Framework separate opening dates of the 'A' season inshore and offshore component fisheries to better assure that harvest operations span the period of optimum roe quality. The opening dates for the inshore and offshore component pollock fisheries would be annually determined at each December Council meeting using a non-discretionary procedure based on the annual Bering Sea pollock total allowable catch, the seasonal apportionment of the TAC to the 'A' season, and fishing effort during the most recent 'A' season (amount of pollock harvest per day).

Option 1. Prohibit vessels used to participate in a BSAI 'A' season from being used to deploy trawl gear in either the BSAI or Gulf of Alaska, except to participate in the BSAI CDQ pollock fishery, during the period extending from the beginning of the fishing year until noon, Alaska local time (A.l.t.), of the opening date of the BSAI 'A' season. During this period, trawl vessels would be allowed to test gear performance within designated trawl test sites specified in existing regulations. The intent of this option is to prevent boats which normally started out in the pollock fishery from commencing their operations on January 20 in other non-pollock fisheries before the start of the frameworked "A" season.

Alternative 3: Change the start date for the 'A' season inshore and offshore component fisheries from January 20 to February 1. Option 1 of Alternative 2 also could be implemented in conjunction with Alternative 3 so that vessels used to participate in the 'A' season pollock fishery could not be used to deploy trawl gear from the beginning of the fishing year until noon, Alaska time, February 1, except as provided in Option 1, described above.

Regarding Option 1, one comment received (see Item D-3(c) Supplemental) suggests a variation to this option. This option would require that any operator who chooses to enter a non-pollock trawl fishery prior to the opening of the pollock fishery would not be allowed to enter the pollock fishery until a certain number of days after the opening date of the pollock fishery, say 10 days. Staff will be available to discuss the possible effects of this proposed variation in addition to presenting a complete overview of the analysis.

Final action on the regulatory amendment can be made at the June meeting, allowing enough time for Secretarial review so that the measure is in place prior to the 1994 pollock "A" season. Attached as Item D-3(c) Supplemental are public comments on the analysis.



Hofdabakka 9, IS-112 Reykjavik, Iceland. Tel:+354 1 686 858 Fax:+354 1 672 392

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<b>Fax no.:</b>	901-907-271,2817	<b>Date:</b>	07 June 1993
<b>To:</b>	North Pacific Fishery Management Council	<b>Total no. of pages:</b>	4 (incl. this one)
<b>Attn.:</b>	Clarence G. Pautzke, Executive Director	<b>From:</b>	Larus Asgeirsson

Dear Sir:

Please find attached a response from Marel and Marel Seattle Inc., to the draft of a report on improved method to measure the total catch in the Bering Sea/Aleutian Islands. The response is directed at the issue of using Marine Flow Scale and the number of observers needed on board. I trust that the response is of interest to you and a contribution to discussion on this matter.

Please be advised that I will be in Seattle from June 14 to June 25 and would be available to meet with the staff of North Pacific Fishery Management Council any time. I can also make my self available for the Council meeting in Kodiak.

If additional information are needed please do not hesitate to contact our Seattle office or contact me directly at Marel office.

I look forward to hearing from you.

Best regards,  
Marel hf

Larus Asgeirsson  
Vice President, Marketing

North Pacific Fishery Management Council  
P.O. Box 103136  
Anchorage  
Alaska 99510

June 7th 1993

Attn.: Clarence G. Pautzke, Executive Director

With reference to the draft for public review on

**DRAFT FOR PUBLIC REVIEW**  
**ENVIRONMENTAL ASSESSMENT**  
**and**  
**REGULATORY IMPACT REVIEW/INITIAL REGULATORY FLEXIBILITY ANALYSIS**  
**FOR A REGULATORY AMENDMENT TO REQUIRE IMPROVED TOTAL WEIGHT**  
**MEASUREMENT IN THE BERING SEA/ALEUTIAN ISLANDS**  
**COMMUNITY DEVELOPMENT QUOTA POLLOCK FISHERIES**

prepared by National Marine Fisheries Service, Juneau, Alaska, May 3, 1993 I would on the behalf of Marel and Marel Seattle comment on the report, especially on the section 3.3. Alternative 3. two observers and certified scales. In this section the security issue is raised regarding weighing reports from the scale. The paragraph states that due to the security issues two observers are needed to monitor the catch numbers, which translates into that an observer has to be on duty 24 hours a day. Marel has looked into this issue and a evaluate possibility to set up the Marel Flow Scale to ensure, better than ever before, that accurate and reliable data is collected.

We would like to emphasise that Marel is committed to work with the NPFMC and factory vessel owners to meet the needs and requirements for accurate weighing and registration.

**Accurate and Secured Weighing**

First of all it is important to recognise that the Marel Flow Scale is positioned in the line with the transport conveyors of the incoming catch and forms an integrated part of the transport system. In other words no fish can bypass the scale without major effort is involved. Hence, all fish must go across the weighing platform in order to bring the fish from holding tanks to the processing area.

The logo for Marel features a stylized fish jumping out of the water, positioned above the word "Marel" in a bold, italicized, sans-serif font.

Marel hf., Höfðabakka 9, 112 Reykjavík,

Simi: 01 696058 Tölva: 2124 MAREL IS Telefax: 01-672392



**Marel would like to propose the following to ensure that one observer is sufficient to monitor the fishing catch of the vessel:**

**Introduce a special access level on the Marel Flow Scale for the observer. By entering a special code or password the observer is permitted to access information related to the weighing and registration of the catch, beyond what is accessible to the crew.**

**The information would be such as:**

- **Weighing records for every predefined period such as every 10 - 15 min.**
- **Accumulated catch weight from some time point, for example the last 8 hours.**
- **Look up a special Log - file to review any changes in the function of the scale to detect if someone has tampered with the scale to cause that incorrect weight is registered. The Log-file will contain all changes made on the Flow Scale affecting the performance of the scale.**

**As the single observer is off duty, the Marel Flow Scale will monitor automatically the catch going across the scale. When the observer is on duty again he or she will check the total weight of fish from last reading and compare to the captain's report. If there is discrepancy in the catch volume the observer can take the following action.**

1. **Use the access level for the observers. Print out weighing ( "catch" ) reports for example every 10 min. period ( see attached diagram ). The diagram will show the observer how the weighing was registered since last inspection was conducted. The observer can see how the processing has developed and draw conclusion if there is a reason for the discrepancy.**
2. **Look at the log-file and view all activities on the scale. The observer will immediately notice if any system changes have been made during the observers off-duty period.**

**Generally speaking we believe that the Marel Flow Scale, with these new features, has sufficient tools to verify the weighing records and allow the observer to decide if the scale has in some way been tampered with .**

**Based on the above, we feel that one observer is sufficient to accurately monitor the catch.**

**Marel welcomes the opportunity to discuss these new features or if possible add new features to improve the security of the data registration.**

**Factory vessels; Importance of data registration**

The need for the NPFMC of accurately estimate the catch of the vessels is vital, but it is also as obvious that the factory vessels need to monitor the catch. Marel believes that installing a weighing device (from Marel or any other manufacturer) is very beneficial for trawlers, especially when quotas are being restricted or an IFQ system implemented, since it allows for much better monitoring of the on board operation. The benefits from such a system is alone a justification to initiate an accurate weighing of the catch. For example, Marel offers both software and hardware to allow the factory trawlers to monitor the yield and the performance of the processing operation. With the Marel system, the factory foreman can see the yield of the factory continuously throughout the day and interfere if the yield is not acceptable. We believe that this kind of monitoring system can increase the recovery by several percent, thus increased the production with the same amount of fish. The result from the operation of the Marel Flow Scale on board Alaska Ocean is a strong testimony for this statement.

We are available any time to discuss this matter.

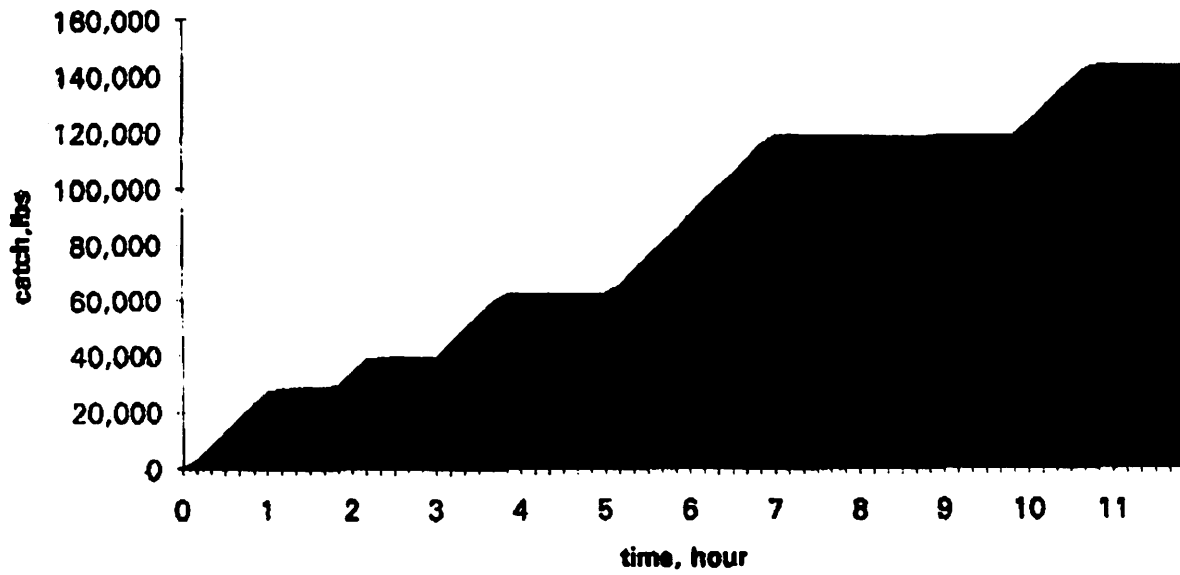
Best regards,  
Marel hf

  
Larus Asgeirsson



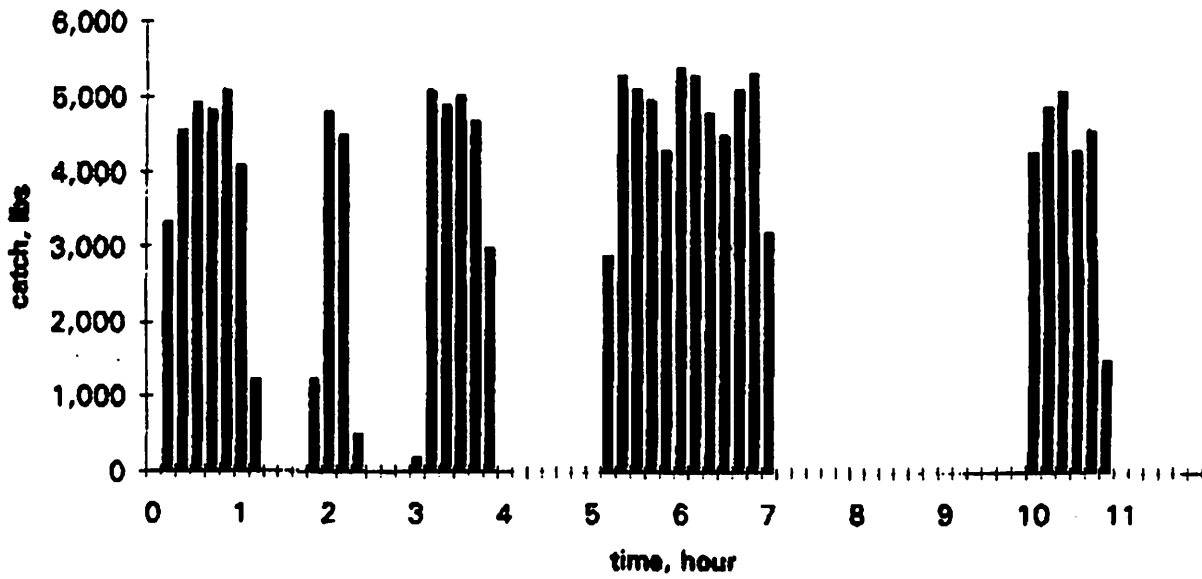
Sheet1 Chart 5

Hourly catch report from Marel Flow Scale



Sheet1 Chart 4

Catch Report for 10 min. time period from Mare1 Flow Scale



O:\rns\la\lisk93\log

## A sample of a Log-File

Following is a sample of a Log-File for a Maral Marine Flow Scale.  
The observer can access this Log-File through a special password or code.  
The Log-File could, as an example, contain the following information:

<i>Rec No</i>	<i>Time</i>	<i>Action</i>	<i>Sys-const</i>	<i>Totalweight</i>
1003	12:04-11/05/93	startup	32-1.3444	100444
1004	12:04-11/05/93	null	32-1.3444	100444
1005	12:05-11/05/93	cal	32-1.3456	100444
1006	13:00-11/05/93	auto	32-1.3456	106023
1007	14:00-11/05/93	auto	32-1.3456	112333
1008	13:00-11/04/93	auto	32-1.3456	120602
1009	14:00-11/05/93	auto	32-1.3456	122400
1010	14:20-11/05/93	startup	32-1.3456	122400
1011	14:33-11/05/93	null	32-1.3456	122400
1012	14:52-11/05/93	param	33-1.3456	127000
1013	15:52-11/05/93	auto	33-1.3456	128500

### Explanations:

**Rec no:** The number of action recorded by the Log-File.

**Time:** The time of the action according to the scale's internal clock.

**Action:** Lists the action taken.

"Auto": Automatic registration on the hour.

"Param": Changes made in the set-up of the scale.

"Zero": The weighing unit was zero adjusted.

"Startup": The scale was turned on.

"Cal": The scale was calibrated.

**Sys-const:** Vital constants for the function of the scale. If they are changed, the weighing function is affected.

**Totalweight:** The total accumulated weight of fish weighed on the scale.

Sheet1

Catch report from Marel Flow Scale

Vessel name: XXXYYYY  
 Species: Alaska Pollock  
 Day: June 2, 1993  
 Observer: John Smith

hour	hourly catch lbs	total catch lbs
1	26,870	26,870
2	7,256	34,126
3	5,200	39,326
4	22,750	62,076
5	0	62,076
6	27,950	90,026
7	28,203	118,229
8	0	118,229
9	0	118,229
10	4,370	122,599
11	20,422	143,021
12	0	143,021



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
P.O. Box 21668  
Juneau, Alaska 99802-1668

AGENDA D-3(b-1)  
JUNE 1993

May 21, 1993

MAY 26 1993

Mr. Richard B. Lauber  
North Pacific Fishery Management Council  
P.O. Box 103136  
Anchorage, Alaska 99510

Dear Rick,

Proposed Amendment 28 to the Fishery Management Plan (FMP) for the Groundfish Fishery of the Bering Sea and Aleutian Islands (BSAI) divides the Aleutian Islands subarea (AI) into three districts to which groundfish may be apportioned during the annual specification process. If approved by the Secretary of Commerce, this amendment would be implemented in early July 1993, during the current fishing year. At its June 1993 meeting, the North Pacific Fishery Management Council (Council) will consider a recommendation to release some of the non-specific operational reserve to increase the 1993 Atka mackerel total allowable catch (TAC) and apportion additional Atka mackerel to the new AI districts.

The National Marine Fisheries Service (NMFS) Steller Sea Lion Coordination Team met recently, in part to discuss this issue. NMFS data indicate that through May 8, 1993, 37,769 metric tons (mt) of Atka mackerel has been caught in the BSAI, almost exclusively from the proposed Eastern AI District. This substantially exceeds the amount, 12,881 mt, that would be available in that district during 1993 based on the biomass distribution and acceptable biological catch (ABC) for Atka mackerel (Table 1). The current biomass distribution of Atka mackerel is (rounded) 44, 45, and 11 percent for the Western, Central, and Eastern Districts, respectively, and the ABC is 117,100 mt (Table 1).

The Steller Sea Lion Coordination Team recommended, therefore, that during 1993 no additional Atka mackerel be available in the Eastern AI District, and that the total 1993 TAC amount available for the Central and Eastern AI Districts not exceed a combined amount (45+11 percent) \* (117,100 mt) = 65,576 mt. Using current catch data, this results in the potential for increasing the Atka mackerel TAC in the Central AI District by a maximum of (65,576 mt - 37,769 mt) = 27,807 mt.

Some fishery representatives have stated that an additional 32,000 mt would satisfy market demand. The Team reviewed this amount and concluded that a TAC increase of 32,000 mt could safely be apportioned to the combined Western and Central AI Districts (Table 1), which would afford harvesters the maximum flexibility for fishing activities. This is acceptable because



(1) some Atka mackerel might be harvested from the Western AI District, and (2) even if all of the additional 32,000 mt were harvested from the Central AI District, the overage would not be expected to have any adverse effect due to the low exploitation rate and temporal dispersion of Atka mackerel fishing in 1993. If more than 32,000 mt is recommended, however, the Central AI District TAC should be limited to the appropriate amount so that the Central and Eastern District TACs remain at or below the combined total of 65,576 mt; at present, this amount is 27,807 mt (Table 1).

After the Council makes a 1993 Atka mackerel TAC recommendation, consultation pursuant to Section 7 of the Endangered Species Act (ESA) will be initiated. If Amendment 28 is approved by the Secretary, and the Council recommends an increase determined to be acceptable under the ESA, NMFS will make every effort to implement the reserve apportionment as soon as practicable, unless requested to do otherwise by the Council. I hope this provides sufficient guidance to the Council for a recommendation regarding Atka mackerel.

Sincerely,



Steven Pennoyer  
Director, Alaska Region

Table 1. Actual and Potential Apportionment of Atka Mackerel Total Allowable Catch (TAC) for 1993 under Fishery Management Plan Amendment 28 for the Bering Sea and Aleutian Islands. Possible increases would be apportioned from the non-specific operational reserve with an inseason action. ABC is Acceptable Biological Catch. Values are in round metric tons.

Proposed District <sup>1</sup>	ABC % <sup>2</sup>	Current TAC	ABC / potential TAC	Current catch <sup>3</sup>	Current difference <sup>3</sup>	Potential 1993 TAC increase <sup>4</sup>	
						up to 32,000	more than 32,000
Eastern/BS	11	32,000	12,881	37,769	- 24,888	0	0
Central	45		52,695	0	+ 52,695	32,000	27,807
Western	44		51,524	0	+ 51,524		51,524
Total:	100		117,100	37,769	+ 79,331	32,000	79,331

<sup>1</sup> For Atka mackerel, the Eastern Aleutian District includes the Bering Sea Subarea (BS).

<sup>2</sup> Biomass distribution percents are rounded to whole numbers.

<sup>3</sup> Current catch by district from NMFS data through May 8, 1993. Difference is potential TAC-current catch.

<sup>4</sup> If increase is limited to 32,000 mt, entire amount may be apportioned to Central and Western Districts combined, otherwise Central District amount is limited.

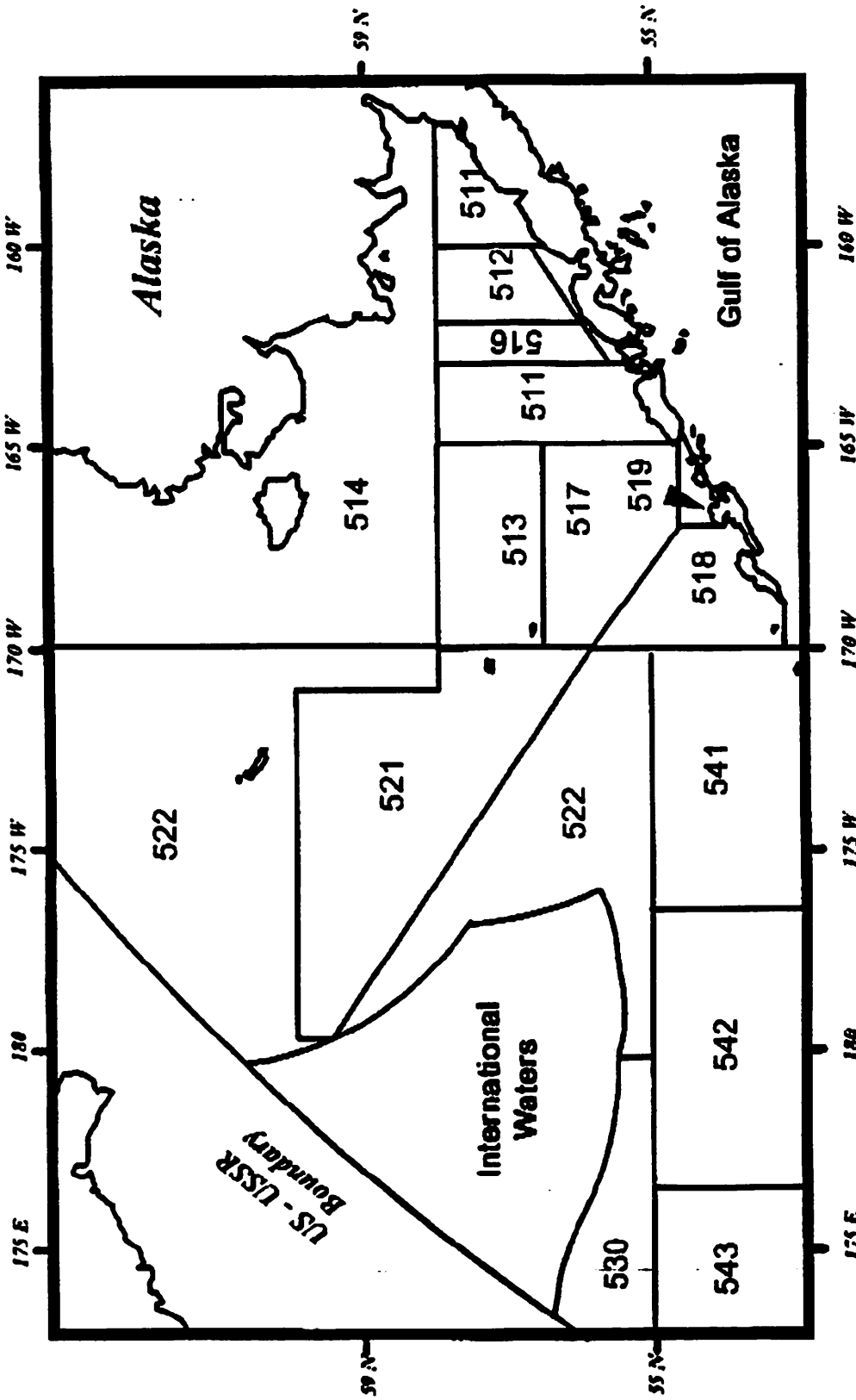
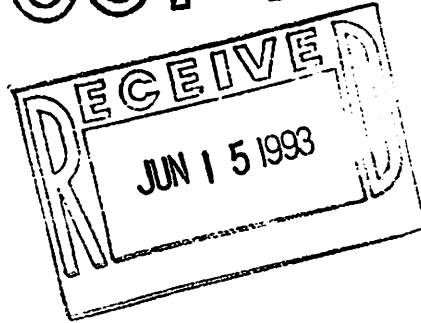


Figure 1. New Aleutian Islands Management Areas After Approval of Amendment 28 to the BSAI FMP. Area 540 will become 541, 542 and 543



**COPY**

Suite 303  
400 N 34th Street  
Seattle, Wash 98103

June 14, 1993

Dr. Clarence G. Pautzke, Executive Director  
North Pacific Fishery Management Council  
605 West 4th Ave  
Anchorage, Alaska 99501

RE: Option 1, "A" season framework amendment

Dear Clarence,

As we discussed on the phone today, I have received some comments regarding the impact that Option 1 of the "A" season frameworking amendment could have on the traditional fishing patterns of certain of the multipurpose boats that have operated in the various Bering Sea trawl fisheries.

In the past certain of the multipurpose vessels, e.g. H&G boats, would begin fishing on January 20th in non-pollock trawl fisheries, e.g. atka mackerel or rock sole, and then switch over to pollock later in the season when the pollock had greater value. These vessel operators are concerned that if Option 1 were applied to Alternatives 2 or 3 as proposed, they would be prevented from conducting their operations in their usual and accustomed manner.

It seems to me that the intent of Option 1 was not to force operators which had normally started out in other trawl fisheries before going into pollock to forego their involvement in the non-pollock trawl fisheries as a prior condition to being allowed to enter the pollock fishery; but rather to prevent boats which normally started out in the pollock fishery from commencing their operations on January 20th in a non-pollock fishery before the start of the frameworked "A" season.

Unfortunately, as now presented, Option 1 will not allow the Council to address both concerns. One variant to Option 1 that might allow achievement of both objectives would be to require that any operator who chooses to enter a non-pollock trawl fishery prior to the opening of the pollock fishery would not be allowed to enter the pollock fishery until a certain number of days, say 10 days, after the opening date of the pollock fishery. Under this scheme if the pollock fishery opening date were February 1 and a vessel fished in a non-pollock trawl fishery prior to that date, that vessel would not be allowed to enter the pollock fishery until February 10.

Myself and others believe that this approach would be sufficient deterrent to keep the true pollock boats out of the non-pollock trawl fisheries prior to the opening of the pollock season while not penalizing the multipurpose boats.

I would greatly appreciate it if the staff could take a look at such a variant to option 1 in hopes that the AP, SSC and Council could consider same during our deliberations on the frameworking amendment.

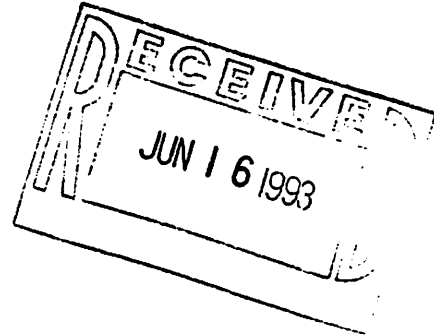
Sincerely,



Walter T. Pereyra

**ARCTIC STORM, INC.**400 N. 34th St., Suite 201  
Seattle, Washington 98103**COPY**

June 15, 1993



Mr. Clarence G. Pautzke  
North Pacific Fishery Management Council  
P.O. Box 103136  
Anchorage, Alaska 99501

Re: Pollock 'A' Season Framework Amendment

Dear Mr. Pautzke:

The following written comments are being submitted in support of the proposed amendment to change the start date of the Bering Sea/Aleutian Islands pollock 'A' season.

The F/T Arctic Storm, which began operations in the winter of 1988, was the first U.S. flag, surimi factory trawler in the Bering Sea. As such, we have witnessed first-hand the rapid changes in the Bering Sea pollock fishery and the dramatic impact that these changes in quotas, seasons and inshore/offshore have had on the profitability of our operation. This impact has been most noticeable with regards to the production of the valuable roe.

In the first few years of our operations we were able to fish year round, moving between the eastern Bering Sea, Bogoslof area, Aleutian Islands and the Gulf of Alaska so as to maximize our revenues. We could find fish with roe to extract from mid-January to early April. Now with the loss of Bogoslof and the Gulf of Alaska together with the truncated fishery in the eastern Bering Sea, we can only extract roe for a fraction of this period plus we have lost the peak mature roe periods.

I estimate that we have lost 60% to 70% of our roe revenues over the last several years as a result of changes in the early season pollock fisheries. Such losses are having a major impact on the economic success of Arctic Storm, and the fishermen and workers who operate her. The only expedient way to recover some of these lost revenues would be to change the timing of the pollock fishery so that it covers the peak roe maturity period in late February.

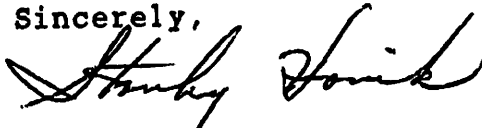
Mr. Clarence G. Pautzke  
June 15, 1993  
Page 2

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For the above reasons we strongly endorse the Council's efforts to change the starting date for the Bering Sea/Aleutian Islands 'A' season pollock fishery. Of the two alternatives we favor Alternative 3, i.e. moving the starting date to February 1st, due to its simplicity, predictability and equality for both inshore and offshore components as it relates to the marketplace. Taking into consideration the large losses to both inshore and offshore participants in the pollock fisheries and the nation by maintaining the current January 20th starting date, we can see absolutely no justification from preserving the status quo.

We thank the Council for consideration of our concerns.

Sincerely,



Stanley Novik  
President

400 NORTH 34th STREET  
SUITE 303  
SEATTLE, WASHINGTON 98103-8600  
(206) 632-6761  
(206) 632-6762 fax

June 17, 1993

Dr. Clarence G. Pautzke  
Executive Director  
North Pacific Fishery Management Council  
P.O. Box 103136  
605 West Fourth Avenue  
Suite 306  
Anchorage, Alaska 99510

re: A Season Frameworking Amendment

Dear Clarence:

In reviewing the document on the A Season Frameworking Amendment I became concerned that there was no attempt made to project the net benefits which might be derived from a delay in the start of the A season. I understand now that NMFS Juneau plans to prepare an addendum to the document to quantify expected net benefits. I assume we will be presented with that addendum at the council meeting.

Without having prior knowledge that this analysis was being done, I did some analysis on my own to get a "feel" for the sorts of benefits which might be realized from an A season delay. Fully recognizing the softness of the data set in the document, I attempted to construct a product/value scenario that might represent what one could expect from an A season fishery under the current regulations as contrasted with what we might have under a frameworked regime. The results of my analysis, which I am presenting only as a means of depicting what might be expected, are attached.

It is obvious from this "what if" exercise that the participants in the pollock fishery and the notion can expect a significant net benefit from a delay in the start of the A season. It will be interesting to compare these results with those contained in the addendum. I am presenting this only as a means of depicting what might be expected.

Yours sincerely,



Walter T. Pereyra

ESTIMATED VALUE FROM ROE - CURRENT REGULATIONS

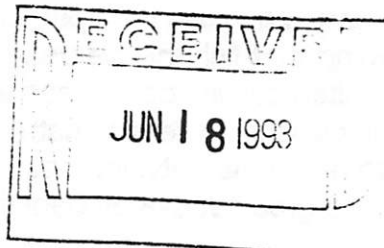
WEEK ENDING	WEEKLY PRODUCTION	ROE PCT	ROE VALUE \$/LB	TOTAL REVENUE
JAN 26	55,000	2.2	5.00	13,337,830
FEB 2	60,000	3.2	6.00	25,396,992
FEB 9	65,000	3.5	7.50	37,615,988
FEB 16	75,000	3.8	8.50	53,406,435
FEB 23	68,212	4.0	9.00	54,136,863
MAR 1		4.2	9.00	
MAR 8		4.5	6.00	
MAR 15		4.0	4.50	
MAR 22		3.0	3.50	
MAR 29		2.5	3.00	
<b>TOTAL</b>	<b>323,212</b>			<b>183,894,108</b>

ESTIMATED VALUE FROM ROE - FRAMEWORKED REGULATION

WEEK ENDING	WEEKLY PRODUCTION	ROE PCT	ROE VALUE \$/LB	TOTAL REVENUE
JAN 26		2.2	5.00	
FEB 2	7,500	3.2	6.00	3,174,624
FEB 9	55,000	3.5	7.50	31,828,913
FEB 16	60,000	3.8	8.50	42,725,148
FEB 23	65,000	4.0	9.00	51,587,640
MAR 1	75,000	4.2	9.00	62,500,410
MAR 8	60,712	4.5	6.00	36,138,332
MAR 15		4.0	4.50	
MAR 22		3.0	3.50	
MAR 29		2.5	3.00	
<b>TOTAL</b>	<b>323,212</b>			<b>227,955,067</b>
		<b>NET BENEFIT</b>		<b>44,060,959</b>



June 15, 1993



Mr. Rick Lauber  
Chairman  
North Pacific Fisheries Management Council  
P.O. Box 103136  
Anchorage, Alaska 99510

Dear Rick:

This is to express our strong opposition to the newly created Central and Western Aleutian Island Atka Mackerel Fishery this year.

The Fishing Company of Alaska, Inc. has an extensive history of fishing experience for Atka mackerel in the proposed fishing area. Our recent data and observations indicate a strong predominance of small, immature fish in the proposed fishing area. This observation appears to be confirmed by the results of the NMFS 1991 survey which also found a strong predominance of immature fish less than 25 cm in length in the Western area. In fact, Dr. Sandra Lowe of the Seattle Science Center confirms that the small, immature fish we have observed could correspond to the strong 1989-1990 year classes identified in the NMFS 1991 survey data.

We believe the execution of a fishery on this resource at this time will have serious conservation consequences:

- we are concerned that the interception of these dense aggregations of small, immature fish prior to their natural migration and dispersal, and prior to reaching maturity, will have an adverse impact on recruitment to other fishing areas and on subsequent year-class production; and
- since the market only accepts fish in excess of approximately 1.5 pounds (40 cm) or better, we are concerned that the opening of a fishery this year will result in an extraordinary level of discards and waste of the resource - possibly destroying these strong year classes prior to reaching maturity.

**The Fishing Company of Alaska, Inc.**

Mr. Rick Lauber  
June 15, 1993  
Page 2 of 2

Our conservation mandate is to prevent waste and to achieve the optimum yield from our fishery resources. We firmly believe that opening that fishery this year will preclude us from achieving these conservation objectives. Alternatively, postponement of the fishery for at least another year will allow these year classes to reach maturity, increase the potential for subsequent strong year classes to reach maturity, increase the potential for subsequent strong year classes, and achieve the greatest overall benefit to the industry and the nation as a whole.

Your earliest and favorable consideration of our request will be greatly appreciated.

Sincerely,



Mike Szymanski  
Government Affairs

cc: Steve Pennoyer  
Alaska Director, NMFS

Dr. Sandra Lowe  
Seattle Science Center



SAFE - Doe

shown in Figure 11.1. A detailed description of the surveys is given by Kimura and Ronholt (1988).

Trawl survey biomass estimates of Atka mackerel have increased from 197,529 mt in 1980 to 306,780 mt in 1983, and 544,754 mt in 1986 (Table 11.1). However, the high value for 1986 is not directly comparable to previous estimates. During the 1980 survey no successful sampling occurred in shallow waters around Kiska and Amchitka Islands, and during the 1983 survey very few stations were successfully trawled. However, during the 1986 survey, several stations were successfully trawled in waters less than 100 m, and some produced extremely large catches of Atka mackerel. In 1986, the biomass estimate from this one depth interval alone totaled 418,000 mt in the Southwest Aleutians (Table 11.1), or 77% of the total biomass of Atka mackerel in the Aleutian Islands. This was a 403,000 mt increase over the 1983 biomass estimate for the same stratum-depth interval.

The 1986 biomass estimate is associated with a large coefficient of variation (0.63). Due to differences in areal and depth coverage of the surveys, it is unknown how this biomass estimate compares to earlier years.

#### 1991 Survey

The 1991 biomass estimate for the Aleutian Islands is 688,151 mt (Table 11.2). Similar to the 1986 survey, the bulk of the biomass (412,185 mt, 59.9%) came from the southwest region. The Southeast region contributed 20.7% (142,149 mt) of the total biomass. The lowest biomass was estimated from the Northeast region (46,151 mt, 6.7%). Virtually all (99.9%) of the Atka mackerel biomass was encountered in the 1-200 m depth strata. Areas where large catches of Atka mackerel were taken during the 1991 survey included Tahoma Reef, Ogla Pass west of Amchitka Island, Tanaga Pass, Amchitka Pass, and Stalemate Bank.

There were 2 critical strata in the Southwest region which contributed a large portion of the biomass, for which variances could not be calculated in the traditional manner due to low sampling effort. Assuming a constant coefficient of variation (CV) for all samples, the variances for these 2 strata were estimated. The CV of 23% associated with total Aleutian biomass incorporates the revised variance calculations for strata of the Southwest region. The lower and upper 95% confidence limits about the mean total biomass estimate are 299,202 and 1,077,276 mt, respectively.

Survey data have been interpreted to show a general shift of fish toward shallower water since 1980 (Kimura and Ronholt 1988). Because sampling in shallow waters was unsuccessful in the early surveys, it is unknown whether the population previously inhabited these waters. However, it is evident that the number of deeper stations producing significant catches has decreased since 1983,

indicating either a movement of a portion of the population to shallower water, or a high mortality on those fish in deeper water.

### Survey Length Frequencies

Interpretation of the survey length frequencies of Atka mackerel is made difficult by the geographic stratification of the stock by size. During the 1980 survey, fish in the northwest and southwest Aleutian Islands averaged 32.3 and 35.3 cm respectively, and fish in the northeast and southeast Aleutians averaged 30.9 and 32.0 cm, respectively (Figure 11.2). Thus in 1980, the largest fish were found in the west and most of the recruitment occurred in the east. The 1983 survey showed a very different situation--the largest fish were found in the east (mean sizes of 37.3 and 38.7 cm) while most of the recruitment appeared in the west (mean sizes of 34.2 and 32.9 cm). During the 1986 survey, the 1983 pattern was again evident with recruitment appearing in the west (mean sizes of 32.2 and 30.8 cm) and the larger fish appearing in the east (mean sizes of 37.6 and 41.1 cm).

According to the 1991 survey, the mean length of fish from both the Northeast and Southeast regions was 31.4 cm, while fish of the Northwest and Southwest averaged 33.0 and 34.4 cm, respectively (Figure 11.3). The mean sizes of fish in the eastern Aleutians are much smaller in 1991 than they were in 1986. Although the average size was smallest in the east, the length frequency distributions showed the smallest fish coming from the west. Fish of sizes from 20-24 cm were evident in the western Aleutians. Fish this small have never been encountered in previous surveys. Modes at approximately 30 cm are noted in the Southwest and Southeast (Figure 11.3). Fish this size are 3-year-olds of the 1988 year class. \*Fish of sizes from 20-24 cm are probably 1-2-year olds of the 1989 and 1990 year classes. It is not clear that evidence of 1-2-year old fish represent strong year classes. The large number of fish at 30 cm may represent significant recruitment from the 1988 year class, but it is still too early to determine the strength of the 1989-90 year classes.

### Survey Age Frequencies

Age distributions from the U.S.-Japan trawl surveys (Figure 11.4) show the dominant 1975 year class in 1980, and the dominant 1977 year class in 1983. Three-year-olds from the 1983 year class were dominant in the 1986 survey, but this is probably a reflection of full recruitment or a lack of older fish rather than a strong year class. One problem should be noted concerning the age determination of Atka mackerel. In the Aleutian Islands region, Atka mackerel is a summer-fall spawning fish that apparently does not lay down an otolith annulus in the first year. Adding one year

Center (AFSC) Ageing Unit makes our age data more consistent with age readings from tail ossicles by Gorbunova (1962). All age data presented in this report have been corrected in this way.

The age composition from the 1991 Aleutian survey is shown in Figure 11.5. The survey encountered a large number of 3-year-old fish of the 1988 year class. The mean age in 1991 was 3.88 years, the youngest mean age of any survey.

*This was a definite strong yearclass, but they would be 5-yr old this year - probably not the "small" fish you are seeing.*

#### Age-structured Modeling

#### Catch Data

From 1977 to 1988, commercial catches were sampled for length and age data by the U.S. Foreign Fisheries Observer Program. There was no JV allocation of Atka mackerel in 1989, when the fishery became fully domestic. Since the Domestic Observer Program was not in full operation until 1990, there was little opportunity to collect age and length data in 1989. Also, the 1980-81 foreign observer samples were small, so these data were supplemented with length samples taken by R.O.K. fisheries personnel from their commercial landings. Data from the foreign fisheries (Figure 11.6) show an increase in the size of fish in the commercial fishery. In 1977 most of the fish were under 30 cm, but by 1979 nearly all were over 30 cm. Mean size increased from 33.0 cm in 1980 to 37.4 cm in 1987, then dropped to 34.0 cm in 1988. An interpretation of the length frequencies of Atka mackerel is made difficult by the geographic stratification of the stock by size, but it appears that there was a large number of young fish which showed up in 1986 and fully recruited by 1988. The large number of 30 cm fish which showed up in the 1988 fishery probably accounted for the sharp drop in mean length.

Length distributions from the domestic fishery in 1989, 1990, and 1991 are shown in Figure 11.7. Mean length was 36.6 cm in 1989, 38.8 cm in 1990, and 38.2 cm in 1991. Since very few Atka mackerel were sampled for length data in 1989, the data are probably not a good representation of the length distribution of Atka mackerel in the 1989 commercial fishery. The 1990 and 1991 data show few fish less than 35 cm, and that for the most part, the fishery harvested fish 35 to 45 cm in size.

Estimates of catch-in-numbers-at-age were estimated using the length frequencies described above and age-length keys. The formulas used are described by Kimura (1987). As with the length frequencies, the age data for 1980, 1981, and 1989 presented problems. The commercial catches in 1980 and 1981 were not sampled for age structures, and there were too few age structures collected in 1989 to construct an age-length key. Therefore, the 1980 survey age-length key was used to estimate 1980 commercial catch age distribution, and these data were further used to estimate the 1981

commercial catch age distribution using a mixture model (Kimura and Chikuni 1987). In the same manner, the 1990 commercial fishery age-length key was used to estimate the 1989 commercial catch age distribution.

The most salient features of the estimated catch (in numbers) at age (Table 11.3) are the strong 1975 and 1977 year classes, and the appearance of a large number of 4-year-olds in 1988. The 1975 year class appeared strong as 3 and 4-year-olds in 1978 and 1979. It is unclear why this year class did not continue to show up strongly after age 4. The 1977 year class appeared strong through 1987, after entering the fishery as 3-year-olds in 1980. The 1988 fishery was basically supported by the 1984 year class which showed up strongly as 4-year-olds. The length frequency data from the 1988 fishery, described above, showed a large drop in the mean length as the 1984 year class appeared in large numbers (Figure 11.6). This year class did not continue to show up strongly in the 1989 and 1990 domestic fisheries (Figure 11.7). The 1988 year class, which survey age data suggested might be strong, did not appear in large numbers in the 1991 commercial catches. There does appear to have been significant recruitment from the 1984-86 year classes as evidenced by the large numbers of 4-year olds in 1988, 1989 and 1990.

→ This year class did show up in the '92 observer data I looked at - but they would have been 4 or 5 years old + that small

It is interesting to note that before 1984, the catches consisted of fish less than 7 years old. Since 1984, 7+ year-old fish have made up a significant portion of the catches. It is not known if there has been an increase in the numbers of older fish, or if they were previously unavailable to the fishery. Also, Atka mackerel seem to be stratified geographically by size. The catch-at-age data may reflect movement of the fishery and the different components of the stock they were harvesting.

### Previous Analyses

Kimura and Ronholt (1988) used virtual population analysis (VPA) and its least squares counterpart (Doubleday 1976; Deriso et al. 1985) to assess Atka mackerel in 1987. The results are briefly described below.

Virtual population analysis (VPA) was carried out using Gulland's classic method (Pope 1972). The results of the VPA were used to provide initial estimates to the least squares model. Although it was noted that the survey data had severe limitations, they provided the only data available to constrain the model.

Kimura and Ronholt (1988) noted that the survey biomass estimates and the catch-at-age data were contradictory. The catch-at-age data are dominated by the strong 1977 year class, which suggests that the biomass should first grow and then decay. On the contrary, the survey biomass estimates showed an increase in biomass over time. They attempted to reconcile this in the least

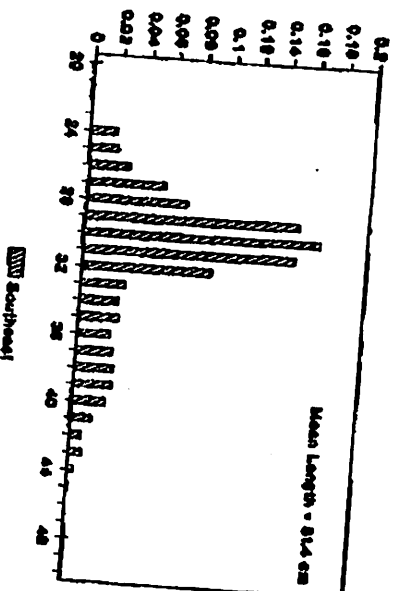
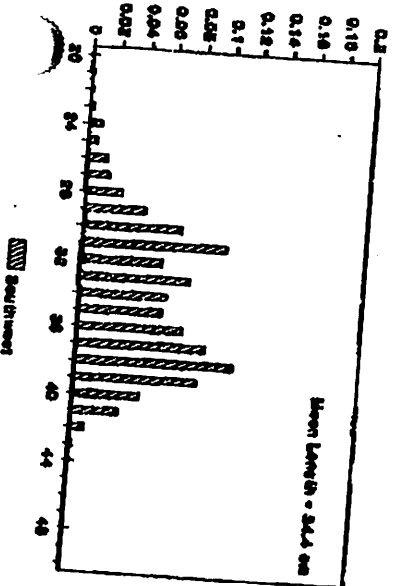
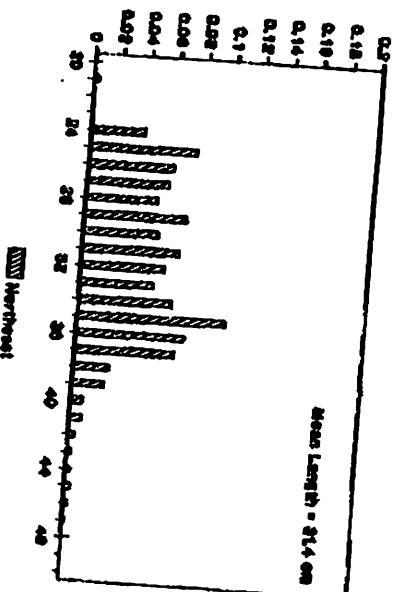
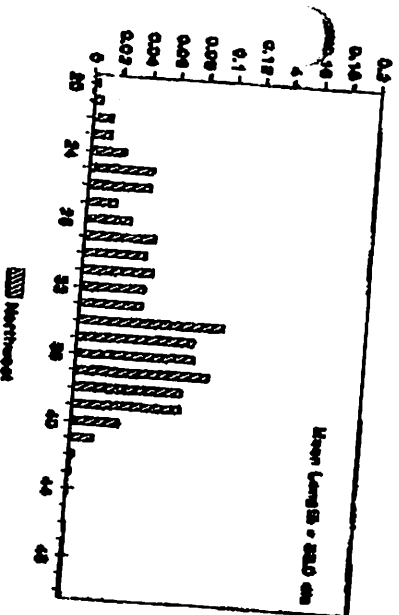
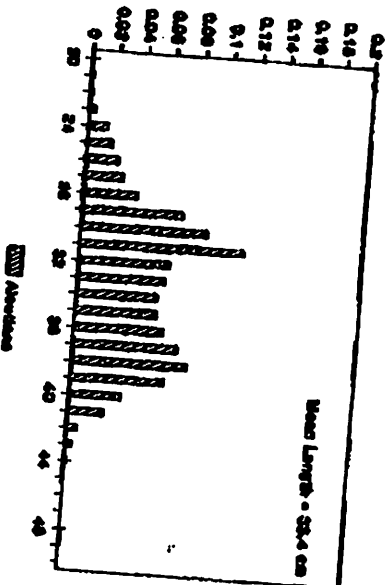


Figure 11.3 Length frequency distributions by subregion of the Aleutian Islands from the 1991 trawl survey.

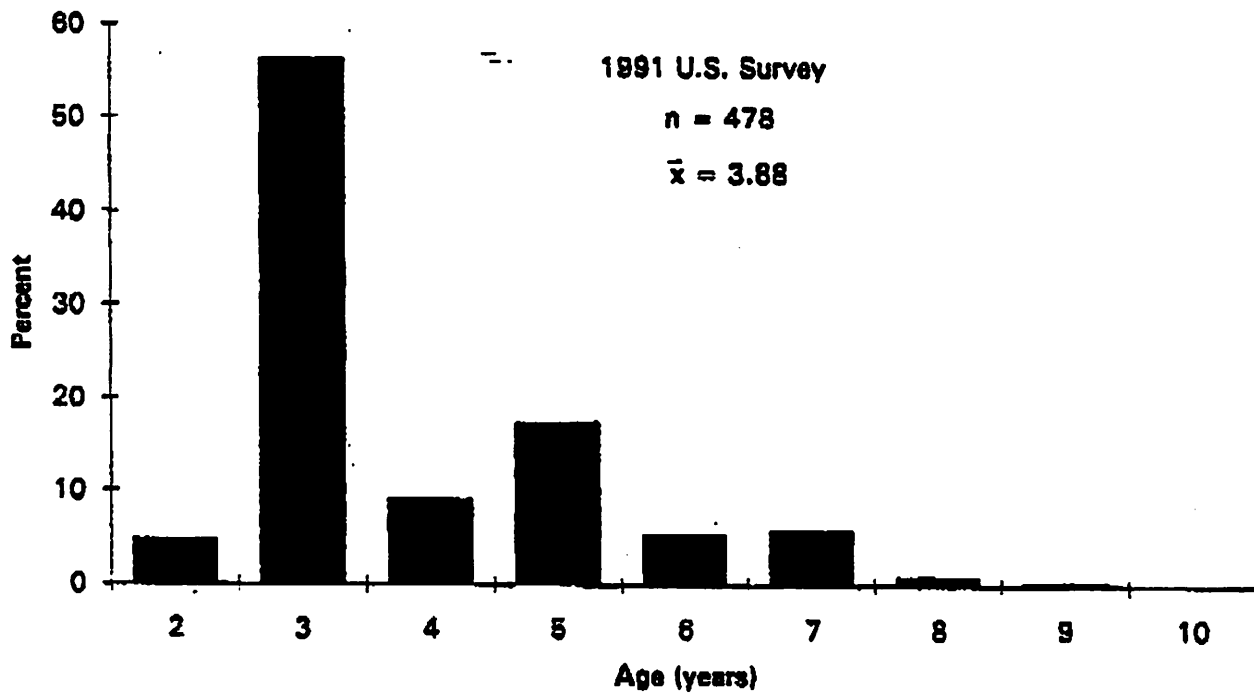


Figure 11.5 Age distribution from the Aleutian Islands region from the 1991 survey.

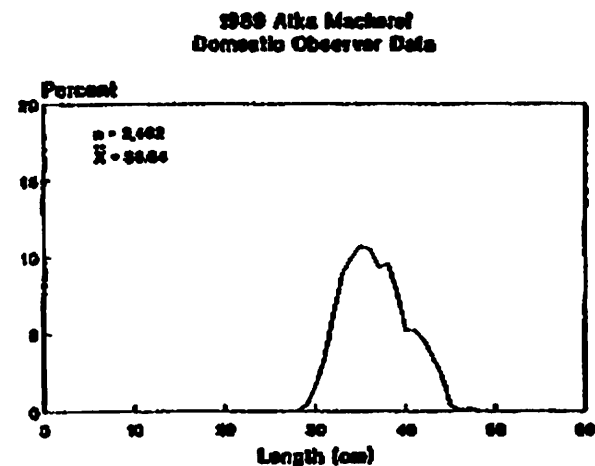
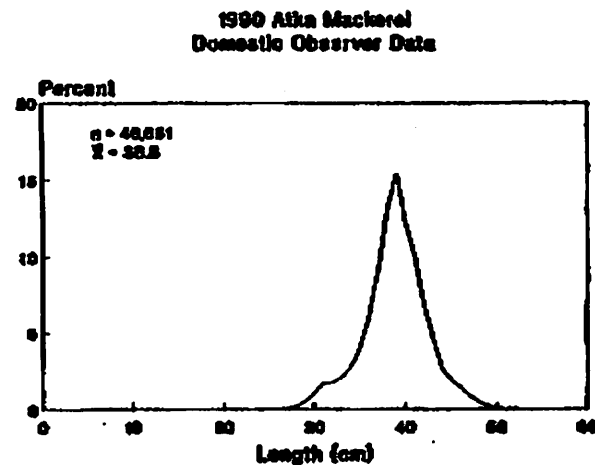
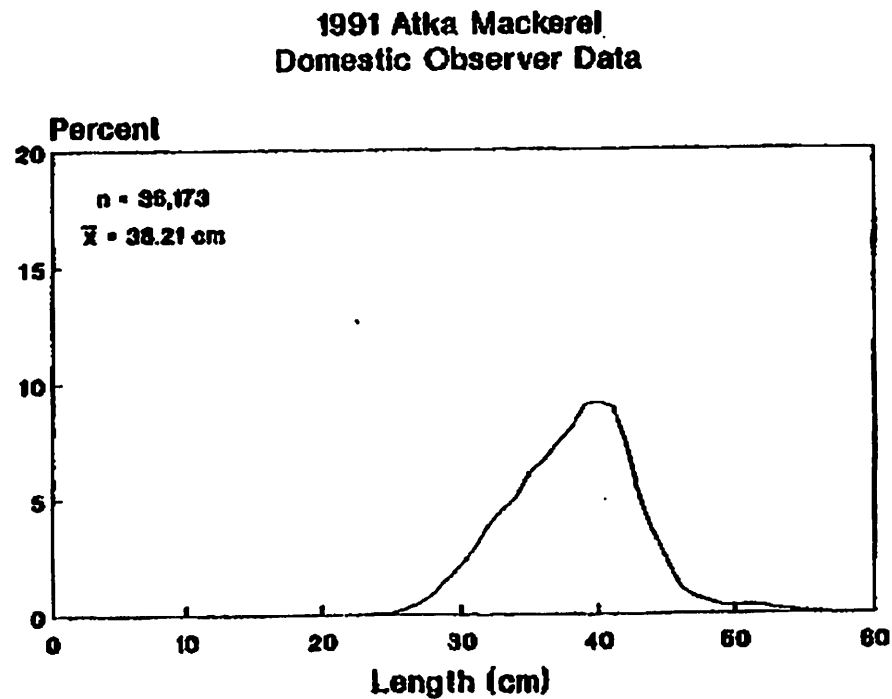
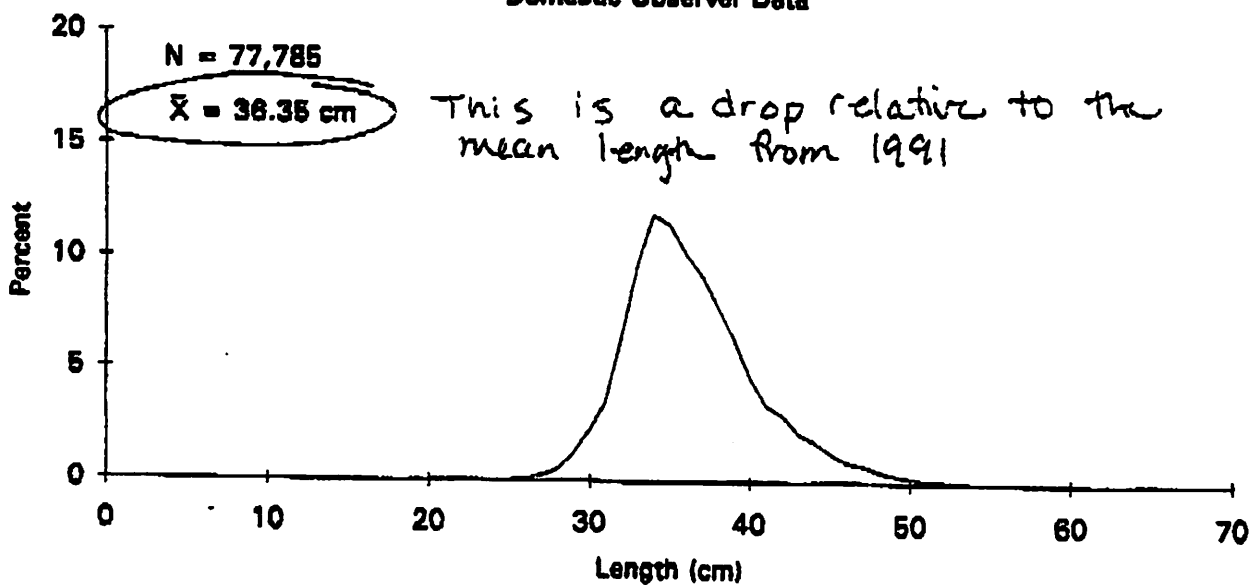


Figure 11.7 Atka mackerel length frequency distributions sampled from the 1989, 1990 and 1991 domestic fisheries in the Aleutian Islands.

Atka92fr.xls

1992 Atka Mackerel Size Composition  
Domestic Observer Data





11-46

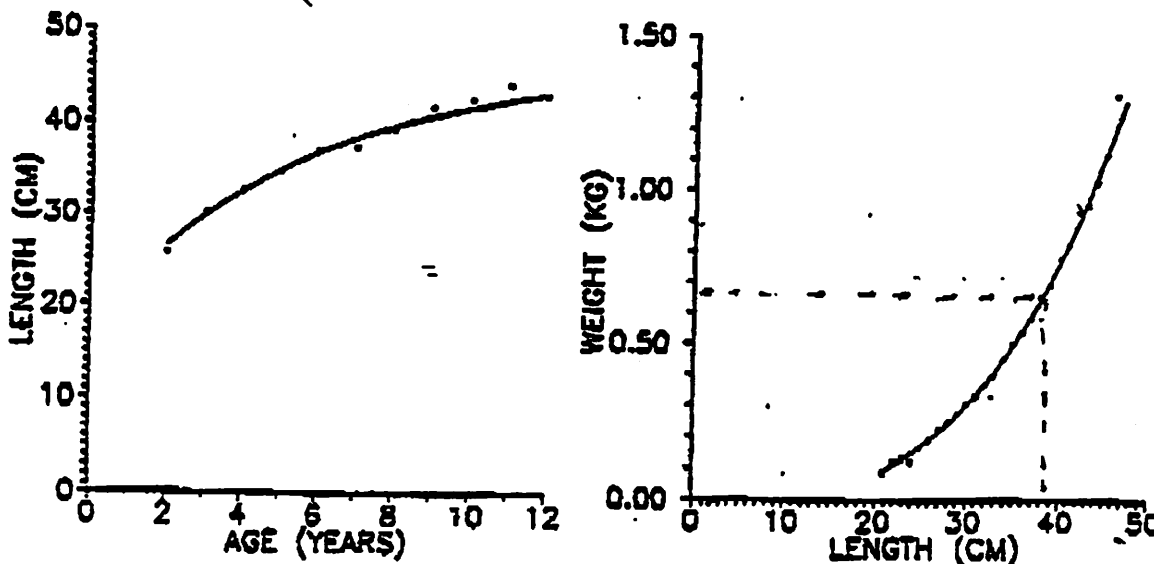
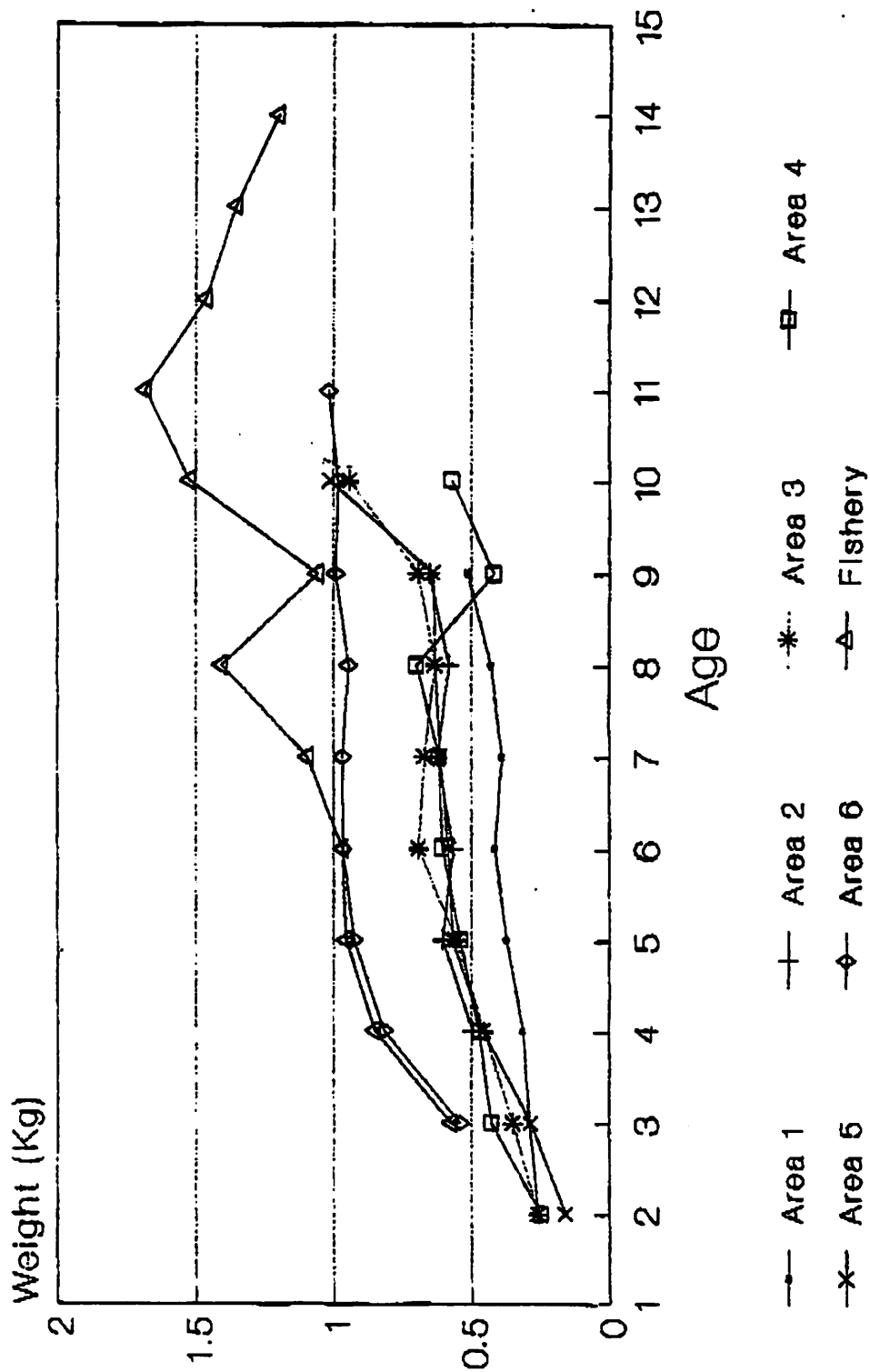


Figure 11.14 Plots of the von Bertalanffy growth curve and length-weight relationship for Atka mackerel in the Aleutian Islands region. Curves were fit using survey data from all areas from the 1980, 1983, and 1986 surveys.

The length vs. age graph may not correspond to fishery data, but the 2<sup>nd</sup> graph with wt vs. length would be useful.

1.5 lb = .68 kg which is about 40 cm.

# COMPARISON OF MEAN WT-AT-AGE FROM FISHERIES DATA AND 6 SURVEY AREAS



Alternatives Considered to Delay  
the BSAI Pollock 'A' Season Start Date

Status Quo: all BSAI trawl fisheries start on January 20

- Value of 'A' season roe decreases as shorter seasons result in fishery targeting on immature roe
- + CDQ fisheries have high value because harvests occur during peak roe maturity
- + No preemption problems identified with delayed 'A' season
- + No change in enforcement effort needed

Alternative 2: Framework the 'A' season start date

- + Potential to increase value of 'A' season roe production, primarily by offshore sector (estimate of net increase of \$30 million for 1993 'A' season)
- Offshore sector concern about market effect of pollock product on the market before their production due to:
  - onshore and offshore pollock start on separate dates
  - CDQ pollock fishery can be prosecuted prior to 'A' season
- Preemption problems - pollock catcher and catcher/processors may fish in other BSAI or GOA fisheries prior to 'A' season
- Decrease value of CDQ fishery over that achieved in 1993 - CDQ partners won't earn as much
- Uncertain start date for operational planning purposes
- Enforcement effort increases because three different start dates for BSAI trawl fisheries (1) onshore and offshore other groundfish, (2) onshore pollock, and (3) offshore pollock

Alternative 3: Start 'A' season on <sup>1/26</sup> February 1 for ~~both onshore and offshore sectors.~~

- + Increased value of roe production
- + Reduces concern about market preemption of offshore product by inshore sector, but CDQ fishery will continue to be able to fish prior to 'A' season start date and pollock bycatch under directed fishing standards may still put pollock product on the market prior to 'A' season.

- + Fixed start date for operational planning purposes
- Same preemption problems of Alternative 2
- Decrease in value of CDQ fishery
- Enforcement effort increases because two different start dates for BSAI trawl fisheries (1) onshore and offshore other groundfish and (2) onshore and offshore pollock

Options to address preemptions problems:

Option 1. Prohibit all trawl vessels who plan to participate in the 'A' season from participating in other groundfish fisheries in the BSAI or GOA prior to opening of the 'A' season.

- + addresses preemption of other groundfish fisheries by pollock vessels
- increased enforcement effort because in addition to two or three different start dates under Alt 2 or 3, also must check all pollock boats to assure that they did not fish in any other groundfish fisheries prior to 'A' season
- prevents some vessels who have fished in other groundfish fisheries prior to or simultaneous with pollock from participation in these fisheries. In 1993, four H&G processors either entered the 'A' season late or had significant harvests of rock sole during the first few weeks of the 'A' season

Option 2: Prohibit all trawl vessels who participate in other groundfish fisheries prior to the 'A' season from fishing in the 'A' season until ~~ten~~ <sup>7</sup> days after the start date.

- + addresses preemption problems
- increased enforcement effort because in addition to two or three different start dates under Alt 2 or 3, also must check all pollock boats to assure that if they fished in any other groundfish fisheries prior to 'A' season they waited ten days to start the 'A' season

**ADDENDUM to the analysis of frameworking the 'A' season**

Tables 2 and 3 have been updated with blend estimates of total catch rather than estimates based on Weekly Production Reports for at-sea processors. Blend estimates are used for quota monitoring and are considered to more accurately reflect total harvests. Roe recovery rates have been adjusted accordingly.

Table 2. Weekly pollock harvest (blend estimates), roe production, and roe as a percent of total harvest for the 1992 Eastern Bering Sea pollock A season (amounts in metric tons).

Week End	Catcher/Processors and Motherships			Shore Plants		
	Total	Roe	% Roe	Total	Roe	% Roe
Jan. 26	49,687	833	1.68	11,731	240	2.05
Feb. 2	74,913	1,960	2.62	10,828	383	3.54
Feb. 9	57,232	1,960	3.42	17,800	593	3.33
Feb. 16	56,905	1,437	2.53	14,074	495	3.52
Feb. 23	70,824	1,634	2.31	18,775	806	4.29
Mar. 1	68,505	2,728	3.98	20,141	951	4.72
Mar. 8	45,026	1,631	3.62	18,693	815	4.36
Total	423,092	12,183		112,042	4,283	

Source: NMFS observer and processor weekly production reports

Table 3. Weekly pollock harvest (blend estimates), roe production, and roe as a percent of total harvest for the 1993 Eastern Bering Sea pollock A season (amounts in metric tons).

Week End	Offshore			Inshore			CDQ		
	Total	Roe	% Roe	Total	Roe	% Roe	Total	Roe	%
Jan. 23	31,641	323	1.0	confidential					
Jan. 30	73,884	966	1.3	2,414	14	0.6			
Feb. 6	61,073	1,554	2.5	7,198	175	2.4			
Feb. 13	61,649	1,399	2.3	17,195	178	1.0			
Feb. 20	75,074	1,499	2.0	22,384	236	1.1			
Feb. 27	28,811	580	2.0	19,395	203	1.1	9,377	391	4.2
Mar. 6				24,212	309	1.3	17,593	686	3.9
Mar. 13				23,228	210	0.9	15,076	616	4.1
Mar. 20				19,214	149	0.8	confidential		
Mar. 27				20,388	112	0.6	confidential		
Total	332,132	6,321		155,628	1,586				

Source: NMFS observer and processor weekly production reports

### Potential benefits from a delay in the pollock 'A' season

Table 6 shows that the estimated gross wholesale value of 'A' season roe production was about \$106 million for the offshore open access fishery and about \$29 million for the CDQ fisheries. The value of roe production for both fisheries was about \$135 million.

Offshore processors contend that the pollock roe maturity was just peaking when the fishery closed on February 22 and that the value of roe production to the offshore open access fishery could have been increased if harvests would have been focused more around the timing of peak pollock roe maturity. The second section of Table 6 presents one scenario to estimate the potential change in the gross wholesale value of roe production if the 1993 offshore pollock harvests would have been delayed by two weeks and started on January 31 rather than January 20. Changes in the value of shoreside production are not considered in this analysis because of the delay in the 1993 season and the uncertainty in predicting season length and timing under status quo.

Delay of the 1993 pollock 'A' season would have transferred open access offshore sector harvests that occurred the last two weeks of January to the period February 22 to March 5. The scenario shown in Table 6 assumes that CDQ harvests would have occurred between January 20 and 31 and again after closure of the open access in the second week of March.

Actual harvests in the open access fishery were used for the period January 31 through February 22 and projected harvests for the two week extension of the fishery were based on an average harvest rate of 9,800 mt/day until the 1993 'A' season harvest of 332,132 mt was reached. CDQ processors were assumed to be able to harvest about 15,000 mt pollock per week. Roe recovery rates and roe maturity rates are based on those reported by processors during the 1993 open access and CDQ offshore fisheries. The estimated gross wholesale value of pollock roe during each week was calculated by applying the average roe maturity rates and respective wholesale prices to either actual or projected roe production.

With a two week delay of the pollock 'A' season, the open access fishery harvests would have occurred during a time of both higher roe recovery rates and a larger proportion of mature roe thus resulting in an increase in roe production from 6,321 mt to about 9,000 mt. The estimated gross wholesale value of the open access roe production under this scenario is about \$150 million. The CDQ fisheries, on the other hand, would have occurred either before or after the timing of peak roe maturity and, therefore, during times of lower roe recovery rates. Under the scenario presented in Table 6, CDQ roe production could have declined from 1,800 mt to about 970 mt resulting in a decrease in wholesale value from \$29 million to \$15 million. Overall, when combining



the changes in estimated gross wholesale value of roe production for both the open access offshore fishery and the CDQ fishery, a two week delay in the 'A' season could have resulted in a net increase in the wholesale value of roe production of about \$30.5 million or about a 23 percent increase. This estimate of change in net value of the pollock harvests does not, however, consider changes in the value of other pollock products produced during the 'A' season, nor does it consider affects on the onshore sector as mentioned above.

Table 6. Estimated gross wholesale value of 'A' season roe production in the 1993 offshore open access and CDQ fisheries with a two week delay of the season start date

Week	% Roe Maturity			Actual 1993 Pollock 'A' Season						Two Week Delay 'A' Season Start Date							
				Open Access		CDQ Fishery		Gross Wholesale Value of Roe Production		Open Access		CDQ Fishery		Roe Recovery Rate	Gross Wholesale Value of Roe Production		
	IM	M	OM	Total	Roe	Total	Roe	Open Access	CDQ	Total	Roe	Total	Roe	Rate	Open Access	CDQ	
23-Jan-93	12.5%	79.0%	8.5%	31,641	323			5,203,621				15,000	153	1.02%		2,464,873	
30-Jan-93	5.0%	86.0%	9.0%	73,884	966			16,001,850				15,000	197	1.31%		3,255,035	
6-Feb-93	2.5%	88.0%	9.5%	61,073	1,554			25,934,852		61,073	1,551		0	2.54%	25,889,027	0	
13-Feb-93	0.0%	88.5%	11.5%	61,649	1,399			23,348,042		61,649	1,399		0	2.27%	23,355,257	0	
20-Feb-93	0.0%	93.0%	7.0%	75,074	1,499			25,574,720		75,074	1,501		0	2.00%	25,617,032	0	
27-Feb-93	0.0%	88.5%	11.5%	28,811	580	9,377	391	9,679,674		68,600	1,749		0	2.55%	29,194,232	0	
6-Mar-93	0.0%	88.5%	11.5%	0		17,593	686		11,448,718	65,736	2,761		0	4.20%	46,077,119	0	
13-Mar-93	0.0%	72.0%	28.0%	0		15,076	616		9,440,046			15,000	621	4.14%		9,516,670	
20-Mar-93	0.0%	72.0%	28.0%	0		2,647	94		1,444,664					3.03%		0	
27-Mar-93	0.0%	72.0%	28.0%	0		291	15		223,741							0	
<b>Total</b>				<b>332,132</b>	<b>6,321</b>	<b>44,985</b>	<b>1,802</b>	<b>105,742,760</b>	<b>29,082,606</b>	<b>332,132</b>	<b>8,962</b>	<b>45,000</b>	<b>971</b>		<b>150,132,666</b>	<b>15,236,578</b>	
								<b>Total</b>	<b>\$134,825,365</b>						<b>Total</b>	<b>\$165,369,244</b>	
																<b>Difference between status quo and season delay:</b>	<b>\$30,543,879</b>

**Assumptions**

Actual harvests based on blend estimates of catch.

Projected harvests in open access fishery based on catch rate of 9,800 mt/day

Roe recovery rates based on combination of open access and CDQ harvests

Roe maturity rates based on data supplied by offshore processors

IM = immature roe, M = mature roe, OM = over-mature roe

Assumed wholesale prices are \$5.00/lb for immature roe, \$8.00/lb for mature roe, and \$4.25/lb for over-mature roe

**UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration***National Marine Fisheries Service**P.O. Box 21668**Juneau, Alaska 99802-1668*

AGENDA D-3(a)

JUNE 1993

Supplemental

June 18, 1993

Mr. Clarence Pautzke  
North Pacific Fishery Management Council  
P.O. Box 103136  
Anchorage, Alaska 99510

Dear Clarence,

At the April 1993 meeting of the North Pacific Fishery Management Council (Council), I expressed concern about implementation of the Comprehensive Rationalization Program (CRP). One alternative being considered for the CRP will be the allocation of individual fishing quotas. This alternative would present us a challenge for fisheries management, given our current tools for quota monitoring and enforcement abilities.

While an implementation plan will be developed in more detail as a part of the CRP analysis, I would like to highlight the need for accurate total catch measurement for Council consideration as it develops its CRP. The current system of total catch estimation and quota monitoring will be inadequate for managing individual fishing quotas (IFQ) for all groundfish.

Effective monitoring of the harvest of target species, other groundfish bycatch, and prohibited species bycatch will require improved observer coverage for all harvesting and processing operations as well as improved equipment with which to estimate harvest weight. In addition to improved observer coverage, at-sea processors will need scales at the minimum for weighing all harvests. Depending on the accuracy of species composition sampling, fish may also have to be sorted prior to weighing. While other more technologically advanced methods for estimating total catch weight may be considered in the future, no viable alternative to scales has been identified at this time. Volumetric estimates of total catch using certified bins will not be adequate for monitoring harvests of groundfish other than pollock or for achieving the level of accuracy NMFS believes will be necessary with CRP.

Improved total catch measurement will be necessary for implementation of individual fishing quotas for all groundfish. NMFS is concerned, however, about simultaneous implementation of these regulations. We would need to proceed with implementation of regulations for improved measurement of total catch prior to implementation of the CRP.



The Council should schedule review of a draft regulatory amendment that would require processors to weigh fish. Such a regulation should become effective in a timely manner, e.g., six months prior to the effective date when a Comprehensive Rationalization Program would be implemented.

Sincerely,



Steven Pennoyer  
Director, Alaska Region

## Summary of Draft Regulations for Total Weight in the CDQ fisheries

- Catcher processors and motherships processing CDQ harvests are required to have two observers.
- Shore processing plants processing CDQ harvests are required to have at least one observer. Two observers may be required if NMFS believes this is necessary to accurately monitor deliveries.
- Catcher vessels delivering to shore plants are required to have an observer.
- Catcher vessels delivering unsorted codends to processors are not required to have an observer.

All processors participating in the CDQ fisheries must provide either certified receiving bins for volumetric estimates of catch or scales for weighing the total catch.

### Requirements for Certified Receiving Bins:

- All groundfish except prohibited species must be placed in certified receiving bins for volumetric estimates of total catch prior to processing or sorting.
- The volume of each bin must be calculated by a certified, independent third party.
- Bins must be marked on all inside walls in 10 cm increments.
- Tables must be prepared which show volume of the bin corresponding with each mark.
- An observer must be able to see into the bins when they contain fish and must be able to see the marks and read the level of fish on all sides of the bin. This may require bins to have windows the full length of the bin and/or lights inside the bin.

### Requirements for Scales

- All groundfish except prohibited species must be weighed prior to sorting or discard.
- The scale must contain a motion compensation device and be capable of at least 98 percent accuracy.
- Observers must be able to check the accuracy of the scale at any time and must be given printed copies of weights recorded by the scale.

**D R A F T**  
(Revised 6/17/93)

For the reasons set out in the preamble, 50 CFR part 675 is proposed to be amended as follows:

PART 675--GROUND FISH OF THE BERING SEA AND ALEUTIAN ISLANDS

1. The authority citation for 50 CFR part 675 continues to read as follows:

Authority: 16 U.S.C 1801 et seq.

2. A new § 675.28 is added to read as follows.

§ 675.28 Accurate measurements of total catch weight in Community Development Quota fisheries

(a) Applicability. All processor vessels and shoreside processing operations participating in Community Development Quota fisheries must comply with applicable requirements for accurate total weight measurements of Community Development Quota groundfish harvests.

(b) General Requirements. (1) All processors receiving groundfish from vessels regulated under this part must accurately measure groundfish catch weights.

(2) Processor vessels and shoreside processing operations are prohibited from fishing for or receiving any groundfish harvested by vessels regulated under this part until compliance with applicable requirements for accurate measurements of total catch weight are met.

(3) Each processor vessel included under paragraph (a) of this section must have two observers onboard the vessel each day groundfish is harvested or received from catcher vessels.

(4) Each shoreside processing operation included under paragraph (a) of this section must have one or more observers present each day groundfish is received for purposes of verifying the total catch weight of each groundfish delivery at any particular time. At any time, observers must be provided access to the scale certified under the Laws of the State of Alaska used to weigh groundfish landings and to the scale printouts recording weighed catch for each groundfish landing.

(i) The manager of each shoreside processing operation included under paragraph (a) of this section must notify the observer(s) assigned to the operation of the offloading schedule of each groundfish delivery in a manner that provides the observer an opportunity to monitor the weighing of the entire portion of each groundfish delivery.

(5) All catcher vessels delivering groundfish harvested under a Community Development Quota must have an observer on the vessel at all times while the vessel is participating in the Community Development Quota fisheries. Vessels delivering only unsorted codends to a processor are not required to have an observer unless specifically required to do so by the Regional Director.

(c) Mothership processors and catcher/processors using trawl gear.

(1) General. For purposes of this section, each mothership processor and catcher/processor vessel using trawl gear to harvest groundfish must provide for total weight estimations by NMFS certified observers consistent with paragraphs (c) (2) or (c) (3) of this section.

(2) Volumetric measurements of total catch.

(i) Each processor vessel must have one or more receiving bins in which all fish catches are placed prior to sorting operations for purposes of determining total catch weight.

(ii) Bin volume certification. (A) The volume of each bin must be accurately measured, the bin permanently marked and numbered in 10-centimeter increments on all internal sides of the bin, and the bin volume and marked increments certified by a qualified organization which has been designated by the United States Coast Guard Commandant, or an authorized representative thereof, for the purpose of classing or examining commercial fishing industry vessels under the provisions of 46 CFR part 28.76. Marked increments must be readable from the outside of the bin at all times.

(B) For purposes of this paragraph, certification of bin volumes must be completed each time a bin has a structural or physical change.

(C) The location of bin markings as witnessed by the certifying organization must be described in writing. In addition, tables certified under paragraph (c) (2) (ii) of this section indicating the volume of each certified bin in cubic meters for each 10 cm increment marked on the sides of the bins must be submitted to the NMFS Observer Program prior to fishing or receiving groundfish and must be maintained onboard the vessel and made available to NMFS certified observers at all times. All documents prepared for bin certification must bear a dated and signed certification.

(iii) Bins must be lighted in a manner that allows marked increments on each side of the bin to be read from the outside of the bin by a NMFS certified observer or authorized officer to

verify the level of fish in the bin for purposes of obtaining measurements.

(iv) Vessel operators must notify observers prior to any removal or addition of fish from each bin used for volumetric measurements of catch in a manner that allows an observer to take bin volume measurements prior to fish being removed from or added to the bin. Bins must not be more than 50 percent full of fish prior to receipt of additional amounts of fish for further volumetric measurements.

(A) Fish cannot be removed from or added to a bin used for volumetric measurements of catch until an observer indicates that bin volume measurements have been completed and any samples of catch required by the observer have been taken.

(v) Fish from separate hauls or deliveries from separate catcher vessels must not be mixed in any bin used for volumetric measurements of catch.

(3) Scale weight measurements of total catch.

(i) All groundfish harvested or received by a processor vessel must be weighed in a manner consistent with this paragraph. All weight measures must be in kilograms.

(ii) Any scale used to measure the weight of groundfish catch must comply with the following standards:

(A) Measure catch weights to at least 98 percent accuracy at any time as determined by a NMFS certified observer or authorized NMFS or U.S. Coast Guard enforcement officer;

(B) Be equipped with a functional motion compensation device to account for vessel acceleration, roll, pitch and vibration movement;

(C) Scale installation must allow for the scale and scale display to be viewed simultaneously by a NMFS certified observer;

(D) Printouts of scale measurements of each haul weight must be made available to observers and be maintained on board the vessel for the duration of the fishing year or for as long after a fishing year that fish product produced from fished harvested during a year are retained on board a vessel.

(iii) The catch from each haul must be kept separate such that the scale weight can be obtained separately for each haul.