


MEMORANDUM

TO: Council, AP and SSC Members

FROM: Clarence G. Pautzke
Executive Director 

DATE: April 17, 1991

SUBJECT: Bycatch Management in the Groundfish Fisheries

ACTION REQUIRED

- ✓1. Review performance of new "pelagic" trawls.
- ✓2. Status report on revised incentive program.
- ✓3. Set bycatch standards for third and fourth quarters.
4. Report on activities of Ad Hoc Bycatch Committee.
5. Joint statement on salmon bycatch.
6. Work schedule for 1992 bycatch amendment.
- ✓7. Report on 1991 salmon bycatch and possible Council action.

BACKGROUND

1. Pelagic Trawls

The Council adopted regulations last September to define "pelagic trawls" that could be used when PSCs closed down bottom trawling in the BSAI or GOA. The Council reaffirmed the changes in net design in December, and the Secretary of Commerce implemented the new design effective January 18, 1991 (D-1(a)(1)). NMFS reported to the Ad Hoc Bycatch Committee in March that the newly designed trawls had arrived in Dutch Harbor in early March, however, they are being used with large weights and have not been effective in reducing bycatch. NMFS will report further on the performance of the new pelagic trawls.

2. Revised Incentive Program

Last November, by teleconference, the Council approved a revised vessel incentive program for Secretarial Review. The program will hold operators of individual trawl vessels accountable for their bycatch of halibut and red king crab during their participation in specified groundfish fisheries:

Halibut	BSAI and GOA Pacific cod trawl fisheries BSAI flatfish fisheries GOA bottom rockfish trawl fisheries
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Red king crab	BSAI flatfish fisheries in Zone 1
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Draft regulations were submitted to Washington, D.C. in early March for publication as an interim final rule. However, the program has been hanging fire during legal reviews and is not expected to be published and effective until early May. NMFS will report on the status of the interim final rule.

3. Bycatch Standards for Third and Fourth Quarters

In December, in anticipation of the revised incentive program being implemented, the Council recommended the bycatch rate standards for the first two quarters as shown in D-1(a)(2). NMFS will provide information at this meeting as the Council considers what bycatch rate standards should be set for the third and fourth quarters.

4. Ad Hoc Bycatch Committee Activities

The Committee met on March 1 and March 20-21 to discuss a variety of issues bearing on bycatch management for 1991 and 1992. Minutes of those meetings are at D-1(a)(3)&(4). Chairman Cotter will provide an overview of the Committee's activities.

5. Joint Statement on Salmon Bycatch

The Bycatch Committee has been working with the Alaska Board of Fisheries, Washington Department of Fisheries, and the Oregon Department of Fish and Wildlife on a draft joint statement on salmon bycatch (D-1(a)(5)). Chairman Cotter will provide further background on the Committee's consideration of the draft statement and why the Council should consider approval.

6. Bycatch Amendment for 1992

The Committee has been developing a list of issues that might be addressed in the next bycatch amendment. They are listed in the minutes of the March 20-21, 1991, meeting (D-1(a)(3)). The Committee will refine that list between now and June, and the Council will be requested to approve the measures to be analyzed over the summer. The Council will be scheduled to approve the measures for public review at the September meeting. Final approval will be scheduled for December.

7. Salmon Bycatch in 1991 and Council Action

There were about 26,000 chinook salmon taken earlier as bycatch in the BSAI groundfish fishery earlier this year, and about 5,000 in the GOA. Bering Sea catches declined after January, but there was a surge in chinook bycatch in the GOA earlier this month, mainly in the POP/rockfish fishery in the eastern Gulf. NMFS will provide additional information on this bycatch problem and the Council may then consider if any response is necessary. There has been no formal request for emergency action.

9. In § 675.2. The definition of *Bottom trawl* is removed; the definitions of *Breast line*, *Bycatch Limitation Zone 1*, *Bycatch Limitation Zone 2*, *Bycatch Limitation Zone 2H*, *Fishing line*, *Foot rope*, *Head rope*, *Hook-and-line*, *Jig*, *Pelagic trawl*, *Pot-and-line*, and *Pot-and-longline* are added alphabetically. The definition of "statistical area" is amended by revising the introductory text and adding paragraphs (f), (g), (h), (i), (j), and (k) to read as follows:

§ 675.2 Definitions.

Breast line means the rope or wire running along the forward edges of the side panels of the net, or along the forward edge of the side rope in a rope trawl.

Bycatch Limitation Zone 1 (Zone 1) means that part of the Bering Sea Subarea that is south of 58°00' N. latitude and east of 165°00' W. longitude (Figure 2).

Bycatch Limitation Zone 2 (Zone 2) means that part of the Bering Sea Subarea bounded by straight lines connecting the following coordinates in the order listed (Figure 2):

North latitude	West longitude
54° 30'	165° 00'
58° 00'	165° 00'
58° 00'	171° 00'
60° 00'	171° 00'
60° 00'	179° 20'
59° 25'	179° 20'
54° 30'	167° 00'
54° 30'	165° 00'

Bycatch Limitation Zone 2H means that part of the Bering Sea Subarea bounded by straight lines connecting the following coordinates (Figure 2):

North latitude	West longitude
54° 30'	165° 00'
56° 30'	165° 00'
56° 30'	170° 00'
55° 42'	170° 00'
54° 30'	167° 00'
54° 30'	165° 00'

Fishing line means a length of chain or wire rope in the bottom front end of a trawl to which the webbing or lead ropes are attached.

Foot rope means a chain or wire rope attached to the bottom front end of a trawl and attached to the fishing line.

Head rope means a rope bordering the top front end of a trawl.

Hook-and-line means a stationary, buoyed, and anchored line with hooks attached, or the taking of fish by means of such a device.

Jig means a single non-buoyed, non-anchored line with hooks attached, or the taking of fish by means of such a device.

Pelagic trawl means a trawl which does not have discs, bobbins, rollers, or other chafe protection gear attached to the foot rope, but which may have weights on the wing tips and (1) which has stretched mesh sizes of at least 64 inches, as measured between knots, starting at all points on the fishing line, head rope, and breast lines and extending aft for a distance of at least 10 meshes from the fishing line, head rope, and breast lines and going around the entire circumference of the trawl, and which webbing is tied to the fishing line with no less than 20 inches between knots around the circumference of the net (Figure 3) and which contains no inserts or collars or other configurations intended to reduce the mesh size of the forward section, or

(2) Which has parallel lines spaced no closer than 64 inches, or a combination of parallel lines and meshes with stretched mesh sizes of at least 64 inches, measured as described above in paragraph (1) of this definition, for a distance of at least 33 feet, and starting at all points on the fishing line, head rope, and breast lines and going around the entire circumference of the trawl (Figure 4).

Pot-and-line means a stationary, buoyed line with a single pot attached, or the taking of fish by means of such a device.

Pot-and-longline means a stationary, buoyed, and anchored line with two or more pots attached, or the taking of fish by means of such a device.

Statistical area means any one of the eleven statistical areas of the Bering Sea and Aleutian Islands management area defined as follows (Figure 2):

(f) Statistical Area 516—that part of Statistical Area 511 that is south of 58° N. lat. and between 162° and 163° W. long.;

(g) Statistical Area 517—that part of Statistical Area 513 that is south of 56°30' N. lat. and between 165° and 170° W. long.;

(h) Statistical Area 521—that part of Statistical Area 522 bounded by straight lines connecting the following coordinates in the order listed: 55°46' N., 170°00' W., 59°25' N., 179°20' W., 60°00' N., 179°20' W., 60°00' N., 171°00' W.,

58°00' N., 171°00' W., 58°00' N., 170°00' W., and 55°46' N., 170°00' W.

(i) Statistical area 522—north of 55°00' N. latitude, west of 170°00' W. longitude, and east of 180°00' longitude;

(j) Statistical area 530—north of 55°00' N. latitude, and west of 180°00' longitude;

(k) Statistical area 540—south of 55°00' N. latitude, and west of 170°00' W. longitude.

10. In § 675.7, paragraphs (c) and (d) are added to read as follows:

§ 675.7 Prohibitions.

(c) Use a vessel:

(1) To fish with trawl gear in that part of Zone 1 closed to fishing with trawl gear in violation of § 675.22(a) of this part unless specifically allowed by the Secretary as provided under § 675.22 (b) (c), and (d) of this part;

(2) To fish with trawl gear in that part of Zone 1 closed to fishing with trawl gear at any time when no scientific data collection and monitoring program exists or after such program has been terminated; or

(3) To fish with trawl gear in that part of Zone 1 closed to fishing with trawl gear without complying fully with a scientific data collection and monitoring program; or

(d) conduct any fishing contrary to a notice issued under § 675.21 of this part:

11. In § 675.20, add the phrase "or PSC allowance" after the phrase "PSC limits" in paragraph (e)(1)(iii) and after the phrase "PSC limit" in both places where it appears in paragraph (e)(2)(ii).

12. In § 675.20, paragraph (b)(1)(ii) is revised and (e)(4) is added as follows:

§ 675.20 General limitations.

(b) . . .

(1) . . .

(ii) *Apportionment between DAP and JVP*. As soon as practicable after April 1, June 1, and August 1, and on such other dates as he determines appropriate, the Secretary will, by notice in the *Federal Register*, reassess and reapportion to DAP the part of JVP needed by DAP, or reassess and reapportion to JVP the part of DAP that he determines will not be harvested by U.S. vessels and delivered to U.S. processors during the remainder of the fishing year, unless such reapportionments to JVP would adversely affect the conservation of groundfish or prohibited species or would have an adverse impact on the

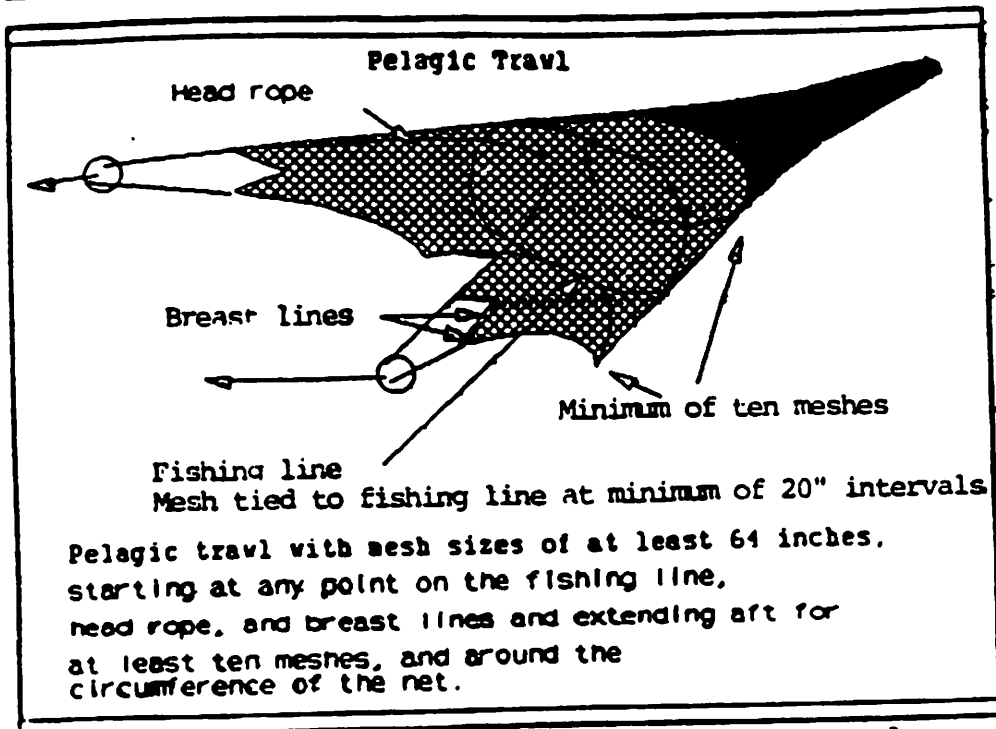


Figure 3. Pelagic trawl constructed with webbing attached from the fishing line, head rope, and breast lines.

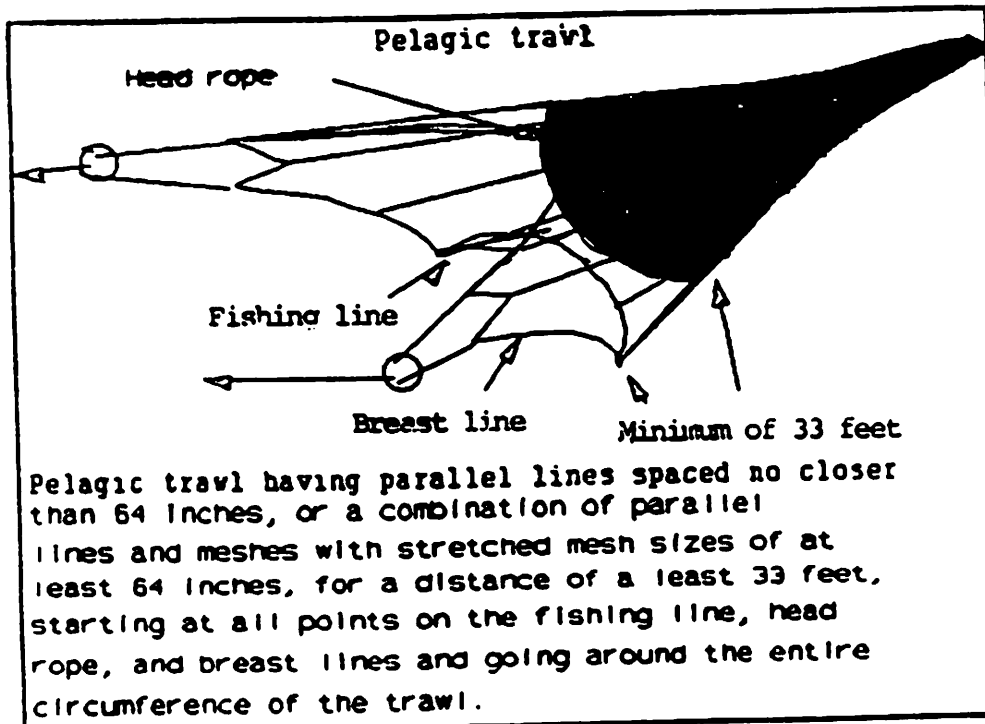


Figure 4. Pelagic trawl constructed with ropes, or combinations of ropes and meshes, from the fishing line, head rope, and breast lines.

Bycatch Incentive Program for 1991

The "vessel penalty box" incentive program to reduce prohibited species bycatch rates, adopted by the Council last June, was disapproved by the Secretary of Commerce for two reasons. First, a vessel's bycatch data, collected by observers, may require up to six months to be verified. Therefore, the data cannot be used immediately inseason to support placing a vessel in the penalty box, as originally intended by the Council. Second, the observer data are highly variable, making it very difficult to establish bycatch standards inseason based on the fleet's overall performance.

Anticipating the disapproval, the Council adopted a revised incentive program during a conference call on November 15 and submitted it to the Secretary for review on November 30. It will address halibut bycatch in the Gulf of Alaska (GOA) and Bering Sea/Aleutian Islands (BSAI) Pacific cod trawl fisheries, halibut bycatch in the GOA rockfish trawl fishery, and red king crab and halibut bycatch in the BSAI yellowfin sole, other flatfish, and rock sole fisheries. Bycatch rates of vessels with observers will be compared monthly with bycatch rate standards published in the Federal Register. The standards will be published at least twice annually by NMFS, and more often as warranted by fleet performance data. Vessels whose bycatch rates exceed the standards will be subject to prosecution and civil penalties, most likely after the season. NMFS also will have authority to publish bycatch rates of individual vessels. The Council intends to expand the program to other fisheries and prohibited species as experience is gained and NMFS enhances its ability to monitor the fisheries.

In December the Council studied bycatch rates, took public testimony, and recommended the standards below for the first two quarters.

<u>Fishery</u>	<u>Quarter</u>	<u>Rate</u>
<u>Halibut wt as % of groundfish catch</u>		
BSAI Cod	1	1.35%
Trawl fisheries	2	1.85%
BSAI Flatfish	1	1.31%
Trawl fisheries	2	0.30%
GOA Cod	1	3.31%
Trawl fisheries	2	4.13%
GOA Rockfish	1	4.00%
Trawl fisheries	2	4.00%
<u>Red king crab numbers/mt groundfish</u>		
BSAI Flatfish	1	2.88/mt
Trawl fisheries	2	1.50/mt

Standards for the second half of 1991 will be determined in April based on observer data. By emergency action, the program should be in place in early January. An analysis of the revised program is available upon request from the Council offices.

DRAFT MINUTES

Ad Hoc Bycatch Committee Meeting March 20-21, 1991 Seattle, Washington

The Ad Hoc Bycatch Committee met on March 20-21, 1991, at the Alaska Fisheries Science Center, Seattle, Washington. Attending were Larry Cotter (Chair), Rick Lauber, Henry Mitchell, Steve Pennoyer, Mark Pedersen, Bob Alverson, Judy Merchant, Clem Tillion, and Wally Pereya. A draft meeting agenda is attached (attachment 1). The Committee addressed items I(e) and II(a)(3) first.

Development of Inseason Bycatch Estimates

Russ Nelson reviewed the use of basket sampling and whole haul sampling procedures. Whole haul sampling was commenced in 1991 and is used when there are pure catches. Basket sampling has been used by observers since 1973 to give species composition and bycatch rates. Partial whole haul sampling has been eliminated as of this year. Forty to fifty percent of trawl hauls are sampled, and it is left up to observer discretion which hauls to sample based on vessel operations and how catches are handled. Catch reports are submitted by the observers at the end of each week. Galen Trumble then used attachment 2 to summarize how bycatch estimates are processed.

Performance of New Pelagic Trawls

Steve Pennoyer noted that the newly designed trawls arrived in Dutch Harbor in early March. Heavy weights are being used to fish near or on bottom. Overall bycatch rates have not changed; the new nets have not been effective in reducing bycatch. He noted that when the second quarter cod fishery opens in the Bering Sea, only about 950 mt of halibut PSC will be available because of excessive bycatch in the first quarter. He also noted that Zone 1 may close due to C. bairdi bycatch and that the cod fishery may be closed by emergency rule to all trawling in the next 3-4 weeks.

Salmon Bycatch

Dave Ackley of ADF&G explained how he is working up information on salmon bycatch to develop correlations between bycatch rates and various fleet operating characteristics. He summarized a briefing document entitled "Data Availability and Proposed Analyses Relevant to Evaluating Chinook Bycatch in the Groundfish Fisheries of the Bering Sea/Aleutian Islands and Gulf of Alaska", ADF&G Regional Information Report No. 5J91-07, March 1991. The report was co-authored by David Carlile. The report summarizes trends in chinook bycatch by year, month, fisheries, and area. Part II summarizes the status of chinook stocks by area, Part III has information on origin of chinooks taken as bycatch, and Part IV lists coded-wire tag returns from the BSAI and GOA. This report was distributed to committee members and additional copies are available at the Council office.

The Committee was informed that some electrophoretic work is being done, summarized in attachment 3, and that salmon scale samples are being collected by observers on trawlers, but not being analysed.

Steve Pennoyer noted that there was a need for a coastwide examination of where salmon are taken as bycatch. Wally Pererya inquired about changes that may have taken place in the trawl fisheries since the 1970's when they were dominated by foreign fleets and chinook stocks were high.

Steve Pennoyer distributed a table showing chinook catches in the Japanese mothership fisheries (attachment 4) and Russ Nelson reviewed information on bycatch in the Donut fisheries (attachment 5). Attachment 6 contains bycatch information on the whiting fishery off the Pacific Council region. That Council is in process of developing measures to control salmon bycatch. It was noted that the U.S.- Canadian troll fishery takes about 700,000 chinook salmon each year. It was also noted that the observer program does not collect stomach samples from chinook salmon. Further work on that issue was held in abeyance by the committee.

Salmon Bycatch Workshop

The workshop needs to be well organized and definitive. The Committee would like to arrange for the meeting to be held in May rather than later on in June. Henry Mitchell and the Executive Director will work on arranging the workshop.

Joint Statement on Salmon Bycatch

The Alaska Board of Fisheries and WDF have approved the draft statement (attachment 7). The Committee suggested that "maximum" be dropped as a modifier to the words "extent feasible" in the first resolve paragraph, line 3. This suggested change needs to be communicated to ODF&W.

Managing Bycatch Outside 200 Miles

NOAA GC will be contacted concerning authority to manage salmon bycatch throughout its range in light of recent changes to the Magnuson Act.

Revised Bycatch Program for 1991

NMFS staff reviewed the proposed regulations for the revised incentive program for 1991. It is anticipated that the rule could be in effect by mid-April. It was noted that industry generally believes that the program should go forward. The Committee concurred, and asked for a report at the April meeting. The Committee noted concern over the relationship between estimates of bycatch and the size of the sample taken from the haul to produce the estimate. They asked for a report on this at the April meeting. The Committee also asked NMFS to identify what the Council can do through plan amendment to increase confidence in bycatch estimates, and how vessels can help observers to their job better.

NMFS reported that excessive bycatches of halibut have been taken in the first quarter cod fishery in the BSAI, which will diminish the second quarter halibut PSC. The second quarter cod fishery could wrap up early because halibut PSC was taken. Steve Pennoyer indicated he would call the Council if he saw a problem coming up. It was also noted that only 15% of the halibut PSC will be available for the third and fourth quarters.

Wally Pererya requested that more information be developed on halibut mortality rates in bycatch. Sources for data include an IPHC paper on mortality, and an ADF&G study on crab mortality.

Bycatch Amendment for 1992

Items that may be included in a comprehensive bycatch amendment for 1992 include:

1. Floating caps for crab and halibut in BSAI/GOA.
2. Vessel incentive system or pool.
3. Hotspot authority in GOA.
4. Close Seward Gully to sablefish and Pacific cod longlining to save on halibut bycatch.

5. Prohibit longlining 10-14 days before halibut season to discourage prospecting. Suboption: limit the prohibition just to those that have registered to fish halibut.
6. Require all groundfish harvests to be weighed or measured volumetrically. Could differ by sector, for example, weigh onshore, volumetrics at sea. Need accurate assessment and industry needs to be tied into formulating solution. Chris Blackburn, Burt Larkins, Doug Gordon and Russ Nelson were asked to come back with suggestions at next committee meeting.
7. Establish halibut PSC limit for longliners in BSA.
8. Close bottom trawling around Pribilofs to protect king crab.
9. Depth restrictions on sablefish longlining in GOA to protect halibut - include seasonal depth restrictions.
10. Close trawling in Eastern GOA.
11. Controls on salmon bycatch, including retention of all salmon caught as bycatch in BSA. Ask NOAA GC for information on U.S. Canada Surfline Agreement under INPFC. Also look into controls used in New Zealand to control chinook bycatch.
12. Consider retention of halibut (examine IPHC charter restrictions). Is there legal authority to allow retention?
13. Year round closure of Zone 1 to bottomtrawling.
14. Review effectiveness of present closed areas.

Staff was requested to report on their availability to perform analysis.

The Committee also would like a report in April on NMFS effort to publish vessel names and bycatch rates, and averages, with magnitude of catches. AFTA is doing an optimization study on reducing bycatch and will forward it to the Council upon completion. There will be a status report on a joint AFTA-IPHC study by June.

Vessel Incentive Pool System

Dale Evans noted that timely communications were a weak link in establishing a vessel incentive pool system. Catch and bycatch reports need to be generated realtime. New COMSAT capabilities should be on line in 1992. The communications package for a vessel should average about \$11,000. NMFS is staffing up to be able to compile and use the incoming data. The Committee noted that NMFS needs to lay out its personnel requirements to analyze the data and implement a vessel incentive system. Such a system is of critical importance to the industry.

Vince Curry, AFTA, reported on progress in establishing a voluntary program wherein vessels will agree to stay out of the fishery for a period of one to two weeks, or for the remainder of the fishery, if the vessel exceeds certain levels of bycatch rates. Thirty factory trawlers and mothership operations, and 10-15 smaller vessels have signed up for the program. Vessel owners participating in the program have signed contracts. The Committee noted it would like to obtain a copy of the contract.

Doug Gordon noted that six of the eight boats from his organization that are fishing cod, have signed up with the voluntary program.

The Committee inquired as to whether participation in a voluntary program could be made a condition for receiving a groundfish fishing permit for 1992. Legal advice is needed from NOAA GC on this issue.

DRAFT AGENDA**Ad Hoc Bycatch Committee**

**Alaska Fisheries Science Center
Room 2079
Seattle, Washington**

**1:30 p.m.*, March 20, 1991
(will continue March 21 and possibly March 22)**

- I. **Revised Bycatch Program for 1991**
 - a. Review proposed regulations and determine if Council teleconference is necessary.
 - b. Voluntary actions industry can take to increase precision of bycatch estimates.
 - c. Consider how Council can help industry establish voluntary vessel incentive pools.
 - d. NMFS report on limitations on field offices to provide sampling advice to observers.
 - e. NMFS overview of development of inseason bycatch estimates, including impacts of product recovery rates.

- II. **Salmon Bycatch**
 - a. Status report on developing salmon bycatch data.
 - 1. Logbook data at AFSC.
 - 2. Bycatch rates by small statistical area.
 - 3. Changes in bycatch with use of newly defined pelagic trawls.
 - 4. Available data from Donut, EEZ, and international symposia.
 - 5. Salmon stock status and origin information.
 - 6. Salmon interceptions in Pacific Whiting fishery.
 - 7. Availability of stomach sample data.

 - b. Status report on arranging workshop for industry and foreign specialists to consider ways to reduce salmon bycatch.

 - c. Joint statement on salmon bycatch

- III. **Develop Bycatch Incentive System for 1992**

- IV. **Bycatch Amendment for 1992**
 - a. Proposed measures to be analyzed
 - b. Schedule for analysis

***Meeting time will be delayed if Fishery Planning Committee is still in session at 1:30 p.m. on March 20.**

1991 Prohibited Species Bycatch Estimation

National Marine Fisheries Service
Alaska Region

March 19, 1991

Prohibited species bycatch estimates are based on two primary data sources: Weekly Production Reports (WPR) submitted by processors and Weekly Observer Reports (WOR) submitted by domestic observers. The estimation procedures are designed to match groundfish production with the most appropriate bycatch rate. Estimates of bycatch for observed catcher/processors, for example, are computed using the WPRs and WORs each week for each specific vessel. Estimates of bycatch for shore plants are made using observer data from vessels delivering to a plant as long as there are at least three vessels observed during the week.

When processor specific matches between Observer Reports and Production Reports are not available, matches are made using combinations of gear, area and target fishery. This ensures, that to the extent data is available, PSC bycatch rates are matched with harvest data from the same gear, area and target fishery.

The 1991 bycatch estimation system has the following steps:

1. **Import Observer Data.** Vessel specific observer rate data is transmitted to the Regional Office by the observer program in Seattle and imported into a DBASE compatible file. This data file includes vessel and processor identifiers, week, zone, gear, target, metric tons of groundfish sampled, and the number or weight of each prohibited species corresponding to the sampled groundfish.
2. **Compute bycatch rates.** Sampled groundfish weights (in metric tons) and PSC amounts (in kilograms or numbers) are summed for all observer reports meeting the selection criteria. The total PSC amount is divided by the total sampled groundfish amount, giving an overall bycatch rate which is, in effect, weighted by the size of the sampled groundfish weights. Several different average bycatch rates are computed, ranging from very specific to very general. The following rates are computed:
 - a. **Processor specific rate.** These bycatch rates are computed for each prohibited species (halibut, bairdi Tanner crab, red king crab, chinook salmon, other salmon, herring) for each unique combination of week, processor, area, gear and target fishery.
 - b. **3-week moving average rate.** These bycatch rates are computed for each prohibited species for each unique combination of week, area, gear and target fishery using observer data from the previous, current, and next week. Rates are recomputed for each week of the year after every data feed. For the most recent week, only the current and previous weeks are used. These rates will be used when a processor specific rate is not available.
 - c. **Quarterly bycatch rate.** The quarterly bycatch rates are computed for each zone, gear and target, for substitution when neither a processor specific rate or a weekly rate is available.
 - d. **Region-wide rate.** These rates incorporate all data from a specific gear and target for the year to date, and are used when no other rate is available.

3. **Determine Targets for Weekly Reports.** Assign each weekly report in the NMFS weekly processor report database to one of the target fisheries specified in Table 1, using the same algorithm used by the observer program in assigning targets to observer reports. The total-catch target is computed using total catch (retained plus discard). This target assignment is used to match the weekly processor report with the appropriate bycatch rate. A second target is computed based on retained catch. This target is used to determine which bycatch allowance the bycatch will be applied toward. For example, if a vessel that is processing and retaining rock sole catches and discards a large amount of pollock, it might be assigned a 'B' target for purposes of bycatch estimation, but the resulting bycatch would be subtracted from the rock sole fishery's halibut allowance based on the retained target 'R'. In most cases, the retained and total targets are identical.
4. **Compute Total Groundfish for each Cell.** Groundfish harvests for each cell are totaled from the NMFS weekly processor report database. A cell is a unique combination of week, processor, area, gear and target
5. **Assign Bycatch Rates to Cells.** Processor specific rates are assigned first, then weekly, quarterly and region-wide rates are assigned as needed. In the event that a fishery has been totally unobserved, a default rate based on the previous year's data is assigned. For shore plants, processor specific rates are used if observer reports are available from three or more vessels delivering to a plant.
6. **Compute Bycatch Estimates.** Estimate bycatch of each prohibited species by multiplying the bycatch rate times the groundfish tons for the cell.
7. **Print Reports.** Compute and print reports showing the PSC bycatch by week, cumulative PSC bycatch, and weekly and cumulative percentages of the PSC quota. The reports are:

Halibut -- BSAI flatfish and 'other' fisheries, each with a primary and secondary bycatch quota.

BSAI report showing bycatch by subarea and target fishery, total groundfish harvest by target fishery, and overall bycatch rate by target fishery.

GOA Hook-&-Line and Trawl fisheries, each with a mortality quota based on a percentage of bycatch.

GOA report showing bycatch by subarea and target fishery, total groundfish harvest by target fishery, and overall bycatch rate by target fishery.

Bairdi -- BSAI Zone 1 flatfish and 'other' fisheries.

BSAI Zone 2 flatfish and 'other' fisheries.

Red King -- BSAI Zone 1 (subareas 511 & 516 except excluding bycatch from 516 from 3/15/90 - 6/15/90) flatfish and 'other' fisheries.

Salmon -- Chinook and other salmon for BSAI and GOA trawl gear.

Table 1. Target fishery definitions for PSC bycatch calculations.

Bering Sea / Aleutian Islands

Target	Definition	Name
P	PLCK \geq .95 of total groundfish	Pelagic Pollock
T	GTRB \geq .35 of total groundfish	Turbot
C	PCOD \geq .45 of total groundfish	Pacific Cod
R	RSOL+FLOU+YSOL \geq .40 of total groundfish AND RSOL > (FLOU + YSOL)	Rock Sole
F	RSOL+FLOU+YSOL \geq .40 of total groundfish AND RSOL \leq (FLOU + YSOL)	Flatfish
B	PLCK \geq .20 of total groundfish	Pollock
W	ARTH \geq .20 of total groundfish	Arrowtooth Flounder
K	POPA+ROCK+SRSN+THDS \geq .35 of total groundfish	Rockfish
S	SABL \geq .20 of total groundfish	Sablefish
A	AMCK \geq .20 of total groundfish	Atka Mackerel
O	all other	Other

Gulf of Alaska

Target	Definition	Name
P	PLCK \geq .95 of total groundfish	Pelagic Pollock
C	PCOD \geq .45 of total groundfish	Pacific Cod
K	POPA+ROCK+SRRE+THDS+DEM1+SLR1 \geq .35 of total groundfish	Rockfish
B	PLCK \geq .20 of total groundfish	Pollock
D	DFL1 \geq .20 of total groundfish	Deep Water Flats
H	SFL1 \geq .20 of total groundfish	Shallow Water Flats
S	SABL \geq .20 of total groundfish	Sablefish
O	all other	Other

Factors Causing Fluctuation in Bycatch Estimates

There are several factors influencing the bycatch estimates that are reported each week. These include:

- Limited observer coverage in a particular fishery caused by 30% coverage vessels deferring their coverage until late in the quarter, and vessels exempt from observer coverage;
- Inseason use of undebriefed observer data, which sometimes contains errors affecting rates;
- Delays in obtaining weekly observer reports, often caused by poor communication equipment for transmitting reports; and
- Delays in obtaining weekly production reports due to late submission by processors.

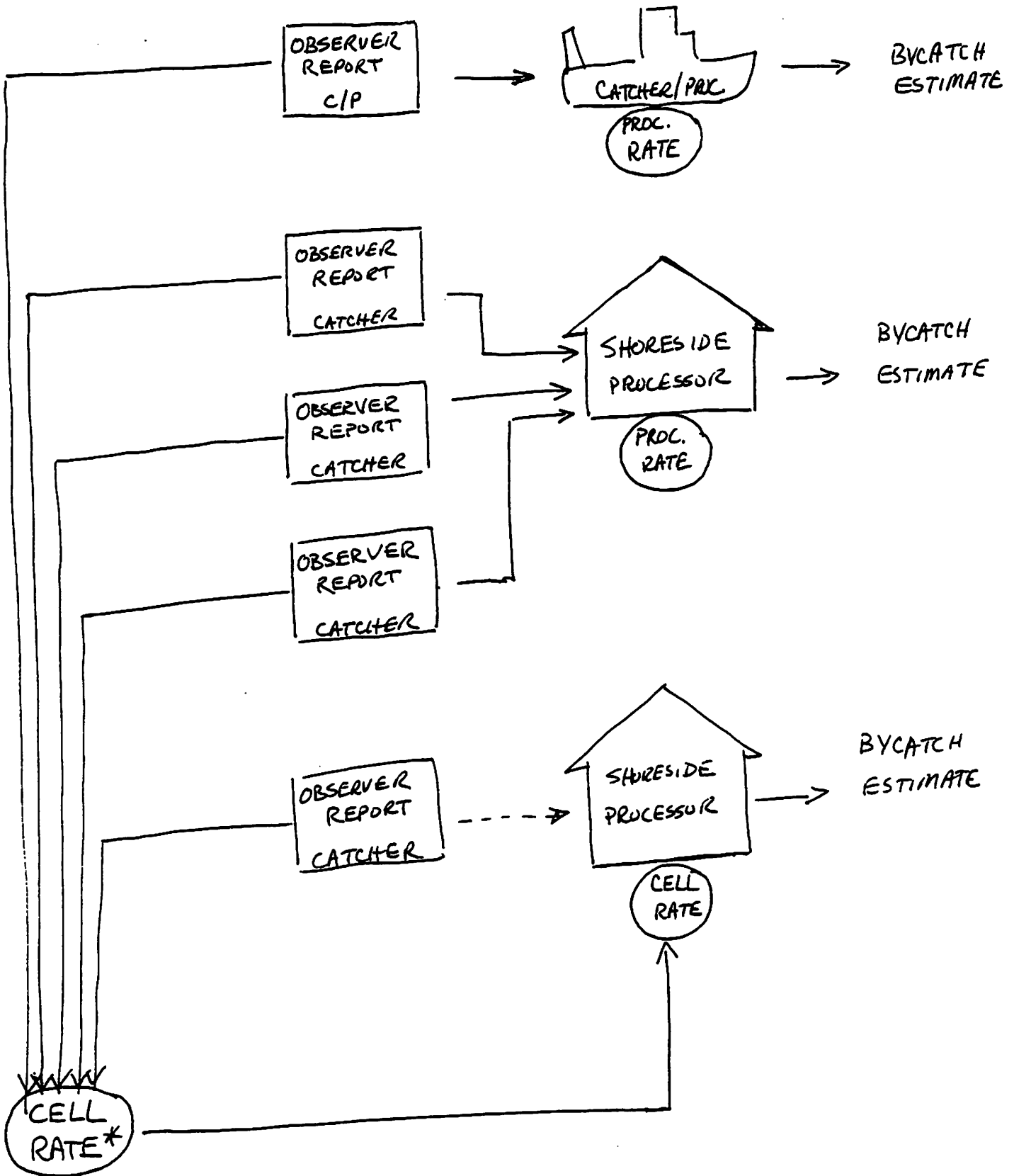
In the 1991 Gulf of Alaska hook and line fisheries, only four observer reports were available from January 1 until mid-February. Three of these reports had halibut bycatch rates that were quite high. The resulting estimates of halibut bycatch mortality grew to near 80% of the first trimester allowance. When more observer data became available, the quarterly and region-wide rates declined, reducing the overall estimates of halibut mortality.

In a second example, early in February an observer report came in from the west GOA Pacific Cod fishery. It had high rates of both halibut and chinook salmon. It was the only observer report submitted on time for that week. At that time the estimation programs used average rates for a specific week, rather than the 3-week moving average currently employed. These rates were applied against all groundfish tonnage assigned to the west Gulf PCOD fishery, resulting in large amounts of estimated halibut and chinook salmon bycatch. In this example, several problems compounded the situation. First, there were more observers in the fishery, but their reports were a full week late due to submission problems and delays in entering the data. Second, the observer had made fundamental errors in filling out the weekly reports, and the data was incorrect. Third, the resulting error was identified by the Regional Office in the halibut report but not in the chinook salmon report, resulting in the erroneous report being posted on the NMFS BBS system.

Two changes have been made to the estimation procedures in order to reduce the impacts of low observer coverage, missing and erroneous observer reports. The first is the use of 3-week moving average rates instead of straight weekly rates. This technique smooths out fluctuations due to weeks with a single or very few observer reports. The second is the use of processor specific rates for shore plants only if at least 3 observer reports are available. It precludes rates from a single observer report from being applied to groundfish harvested by other, unobserved vessels.

These procedural changes, coupled with the growing volume of observer data available as vessels complete their first-quarter coverage requirements, have resulted in stabilizing the bycatch estimates during recent weeks.

MATCHING OF OBSERVER REPORTS WITH PROCESSOR HARVEST DATA



* WEEK, ZONE, GEAR, TARGET

MEMORANDUM**STATE OF ALASKA
DEPARTMENT OF FISH AND GAME
COMMERCIAL FISHERIES
GENETIC STOCK IDENTIFICATION****March 18, 1991****TO: Dave Carlile
Doug Eggers
Juneau****FROM: Lisa See *LS*
Anchorage****SUBJECT: Chinook Salmon GSI Database**

I have reviewed the available protein electrophoretic data for chinook salmon and its utility for genetic stock identification (GSI) analyses in the by-catch in the Bering Sea. These analyses will require access to baseline data collected by several different state and federal agencies.

The "coastwide" chinook GSI database is maintained by National Marine Fisheries Service, Seattle, and includes a comprehensive set of data of approximately 37 loci from over 200 collections ranging from California to British Columbia. The data have been collected by National Marine Fisheries Service, Seattle; Washington Department of Fisheries, Olympia; and University of California, Davis. This database is internally consistent with respect to scoring of alleles (standards of all alleles have been exchanged among those laboratories). It is distributed freely among agencies. Unfortunately, to date no Alaska data are maintained on this same database. This situation has arisen due to some long-standing professional rivalries.

GSI data from Alaskan chinook salmon populations has been collected by two laboratories, National Marine Fisheries Service, Auke Bay (NMFS/AUKE), and U.S. Fish and Wildlife Service, Anchorage (USFWS). Garrettt et al. (1987) from NMFS/AUKE published a study of Alaska populations ranging from Norton Sound to Southeast Alaska from collections made in 1982-1984. Data from 28 loci are included. However, it is unlikely that these data could be readily used in conjunction with the coastwide GSI database because of the need for allele verification and because of the many newly resolvable loci not included.

Both Alaska laboratories are currently collecting more comprehensive data sets which will be consistent with the coastwide standards. USFWS has sampled the Yukon, a portion of the Kuskowim, Bristol Bay, and Alaska Peninsula; NMFS/AUKE has resampled the major Southeast Alaska systems (Table 1).

Several areas are underrepresented in the Alaska collections (Table 1). In the Bering Sea region these include Norton Sound and the Kuskowim system. Westward, no data are available from the South Alaska Peninsula (Chiglik) or

Kodiak Island. In the Southcentral region, samples need to be collected from Upper and Lower Cook Inlet and Prince William Sound. Both USFWS and NMFS/AUKE have expressed interest in pursuing collections from these areas this coming season. However, I believe it is in the best interest of ADF&G to analyze these collections in our Anchorage laboratory. We can then guarantee the samples are consistent with the coastwide database and obtain the data in a timely fashion. In the absence of available funding to analyze the samples internally, we will coordinate the collection and analysis effort with the other Alaska laboratories.

Obtaining data from Soviet chinook is a very high priority with NMFS and USFWS for their high seas interception work. Soviet data are also desirable for the Bering Sea by-catch question, although the relative contribution of Soviet chinook to the overall population of the Bering Sea is uncertain. Soviet scientists are currently visiting Alaska and Seattle laboratories, and it is my understanding that they have brought some chinook samples with them. There is also a proposal for representatives from NMFS and USFWS to travel to the Soviet Union this summer on a collecting trip for various salmonid species.

We have been given the 1989 coastwide GSI database and preliminary data from USFWS Alaska collections (Table 1). We anticipate the USFWS data will be complete and standardized by June of this year. No data are currently available from NMFS/AUKE, nor has a timetable been set for access to these data. In summary, we should be working towards the following steps to effectively use GSI mixed stock analyses of trawl by-catch chinook:

1. Completion and standardization of the laboratory analysis of existing Alaskan collections by NMFS/AUKE and USFWS
2. Collection and analysis of underrepresented Alaskan areas by ADF&G
3. Collection and analysis of Soviet chinook samples by West Coast and Alaska laboratories
4. Exchange of standards and data among all U. S. and Canadian laboratories

Literature Cited

Gharrett, A. J.; Shirley, S. M.; and G. R. Tromble. 1987. Genetic relationships among populations of Alaskan chinook salmon (Oncorhynchus tshawytscha). Can. J. Fish. Aquat. Sci. 44:765-774.

Table 1. Collections of Alaskan chinook salmon for GSI analysis. Information is from U. S. Fish and Wildlife Service, Anchorage (USFWS), and National Marine Fisheries Service, Auke Bay (NMFS). Only collections for which nearly complete data sets can be obtained are included. Collections are in varying stages of laboratory completion.

Population	N	Date	Source
Norton Sound			
Unalakleet	No data		
Shaktoolak	No data		
Yukon River			
Alaska			
Andreafsky	100	1988	USFWS
Anvik River	100	1987, 1988	USFWS
N. F. Nulato	50	1988	USFWS
S. F. Nulato	50	1988	USFWS
Gisasa River	137	1987, 1988	USFWS
Jim River	96	1987	USFWS
Henshaw Creek	87	1987	USFWS
S.F. Koyukuk	88	1987	USFWS
Salcha	100	1988	USFWS
Chena	248	1987, 1988	USFWS
Canada			
Klondike	44	1989	USFWS
McQuesten	38	1989	USFWS
Tatchum Creek	78	1988, 1989	USFWS
Big Salmon R.	118	1988, 1989	USFWS
Little Salmon R.	62	1988, 1989	USFWS
Bear Feed Creek	87	1989	USFWS
Takhini R.	26	1989	USFWS
Nisutlin R.	71	1989	USFWS
Blind Creek	150	1989	USFWS
Ross River	44	1988, 1989	USFWS
Kuskokwim River			
Aniak River	57	1989	USFWS
Salmon River	50	1989	USFWS
Kipchuk River	50	1989	USFWS
Eak River	67	1989	USFWS
Kanektok River			
Kanektok River	75	1989	USFWS
Goodnews River			
North Fork River	57	1989	USFWS
Togiak	75	1988	USFWS

Table 1. Continue.

Population	N	Date	Source
Nushagak River			
Nushagak River	30	1988	USFWS
Portage Creek	10	1988	USFWS
Mulchatna River	35	1988	USFWS
Alagnak	76	1989	USFWS
Naknek River			
Big Creek	47	1988	USFWS
Rapids Camp	40	1988	USFWS
Bristol Bay			
Egegik			
King Salmon River	50	1989	USFWS
North Alaska Peninsula			
Meshik River	58	1989	USFWS
Bear River	62	1988	USFWS
Nelson River			
Sapsuk River	75	1988	USFWS
South Alaska Peninsula			
Chiglik	No Data		
Kodiak Island			
Red River	No Data		
Karluk River	No Data		
Copper River	No Data		
Kenai River	No Data		
Susitna River	No Data		
Yakutat Bay			
Situk R.	88	1988,1990	NMFS
Alsek River			
Klukshu River	305	1987-1990	NMFS
Chilkat River			
Chilkat R.	100	1988	NMFS
Tahini R.	174	1987-1990	NMFS

Table 1. Continue.

Population	N	Date	Source
Taku River			
Dudidontu R.	68	1987,1990	NMFS
Kowatua C.	290	1987-1990	NMFS
Tatsatua C.	328	1989-1990	NMFS
Nahlin R.	452	1987-1990	NMFS
Nakina R.	298	1987-1990	NMFS
Tseta R.	83	19989	NMFS
Northwest Admiralty Island			
King Salmon R.	326	1988-1990	NMFS
West Frederick Sound			
Farragut River	8	1989	NMFS
Stikine River			
Andrews Creek	57	1989	NMFS
Little Tahltan	284	1988-1990	NMFS
North Arm	18	1989	NMFS
Bradfield Canal			
Harding River	48	1989	NMFS
Unuk River			
Unuk River	100	1987	NMFS
Cripple C.	121	1988	NMFS
Clear C.	33	1989	NMFS
Gene's Lake	67	1989	NMFS
Boca De Quadra			
Keta River	15	1989	NMFS
Chickamin River			
Chickamin R.	251	1987-1990	NMFS

Estimated regional stock composition of the catch of chinook salmon by the Japanese Mothership Salmon Fishery, Source: INPFC Doc. 2837, Table 19 (Methodology); INPFC DOC. 2344, 2378, 2454, 2489, 2607, 2739, 2866, 2988, 3132, 3269 and 3375; M. L. Dahlberg, NMFS, August 2, 1989.

Region of Origin	1982 Catch in Thousands of Fish			Region of Origin	1983 Catch in Thousands of Fish		
	Bering Sea	North Pacific	Total		Bering Sea	North Pacific	Total
Asia	5	17	22	Asia	2	17	19
North America	33	52	85	North America	16	52	68
Western Alaska	28	17	45	Western Alaska	14	17	31
Central Alaska	5	29	34	Central Alaska	2	29	31
SE Alaska -				SE Alaska -			
British Columbia	0	6	6	British Columbia	0	6	6
All Regions	38	69	107	All Regions	18	69	87

Region of Origin	1984 Catch in Thousands of Fish			Region of Origin	1985 Catch in Thousands of Fish		
	Bering Sea	North Pacific	Total		Bering Sea	North Pacific	Total
Asia	4	10	14	Asia	2	12	14
North America	28	40	68	North America	14	38	52
Western Alaska	24	13	37	Western Alaska	12	13	25
Central Alaska	4	21	25	Central Alaska	2	21	23
SE Alaska -				SE Alaska -			
British Columbia	0	6	6	British Columbia	0	4	4
All Regions	32	50	82	All Regions	16	50	66

Region of Origin	1986 Catch in Thousands of Fish			Region of Origin	1987 Catch in Thousands of Fish		
	Bering Sea	North Pacific	Total		Bering Sea	North Pacific	Total
Asia	2	11	13	Asia	2	5	7
North America	16	31	47	North America	15	17	32
Western Alaska	14	10	24	Western Alaska	14	6	20
Central Alaska	2	18	20	Central Alaska	1	9	10
SE Alaska -				SE Alaska -			
British Columbia	0	3	3	British Columbia	0	2	2
All Regions	18	42	60	All Regions	17	22	39

Region of Origin	1988 Catch in Thousands of Fish			Region of Origin	1989 Catch in Thousands of Fish		
	Bering Sea	North Pacific	Total		Bering Sea	North Pacific	Total
Asia	3	0.6	3.6	Asia	1.7	0.5	2.2
North America	21	1.9	22.9	North America	12.3	1.5	13.8
Western Alaska	18	0.6	18.6	Western Alaska	10.5	.5	11.0
Central Alaska	3	1.0	4.0	Central Alaska	1.8	.8	2.6
SE Alaska -				SE Alaska -			
British Columbia	0	0.3	0.3	British Columbia	0	.2	.2
All Regions	24	2.5	26.5	All Regions	14	2	16

Estimated regional stock composition of the catch of chinook salmon by the Japanese Mothership Salmon Fishery, Source: PC
 Doc. 2837, Table 19 (Methodology); INPPC DOC. 2344, 2378, 2454, 2489, 2607, 2739, 2866, 2988, 3132, 3269 and 3375; M. L. Dahlberg, NMFS, August 2, 1989.

Region of Origin	1978 Catch in Thousands of Fish			Region of Origin	1979 Catch in Thousands of Fish		
	Bering Sea	North Pacific	Total		Bering Sea	North Pacific	Total
Asia	1	24	25	Asia	8	14	22
North America	8	72	80	North America	60	44	104
Western Alaska	7	24	31	Western Alaska	51	15	66
Central Alaska	1	40	41	Central Alaska	9	24	23
SE Alaska - British Columbia	0	8	8	SE Alaska - British Columbia	0	5	5
All Regions	9	96	105	All Regions	68	58	126

Region of Origin	1980 Catch in Thousands of Fish			Region of Origin	1981 Catch in Thousands of Fish		
	Bering Sea	North Pacific	Total		Bering Sea	North Pacific	Total
Asia	51	71	122	Asia	2	17	19
North America	371	211	582	North America	19	50	69
Western Alaska	316	70	386	Western Alaska	16	17	33
Central Alaska	55	118	173	Central Alaska	3	28	31
SE Alaska - British Columbia	0	23	23	SE Alaska - British Columbia	0	5	-
All Regions	422	282	704	All Regions	21	67	88

vary considerably each season. There are insufficient data to determine if pollock remain within the basin or follow some sort of migratory pattern within the Aleutian Basin and surrounding shelf waters.

At the present time there are insufficient data to determine absolute levels of abundance or yield within the Aleutian Basin with any degree of confidence.

SALMON AND HERRING BYCATCH IN THE ALEUTIAN BASIN POLLOCK FISHERY

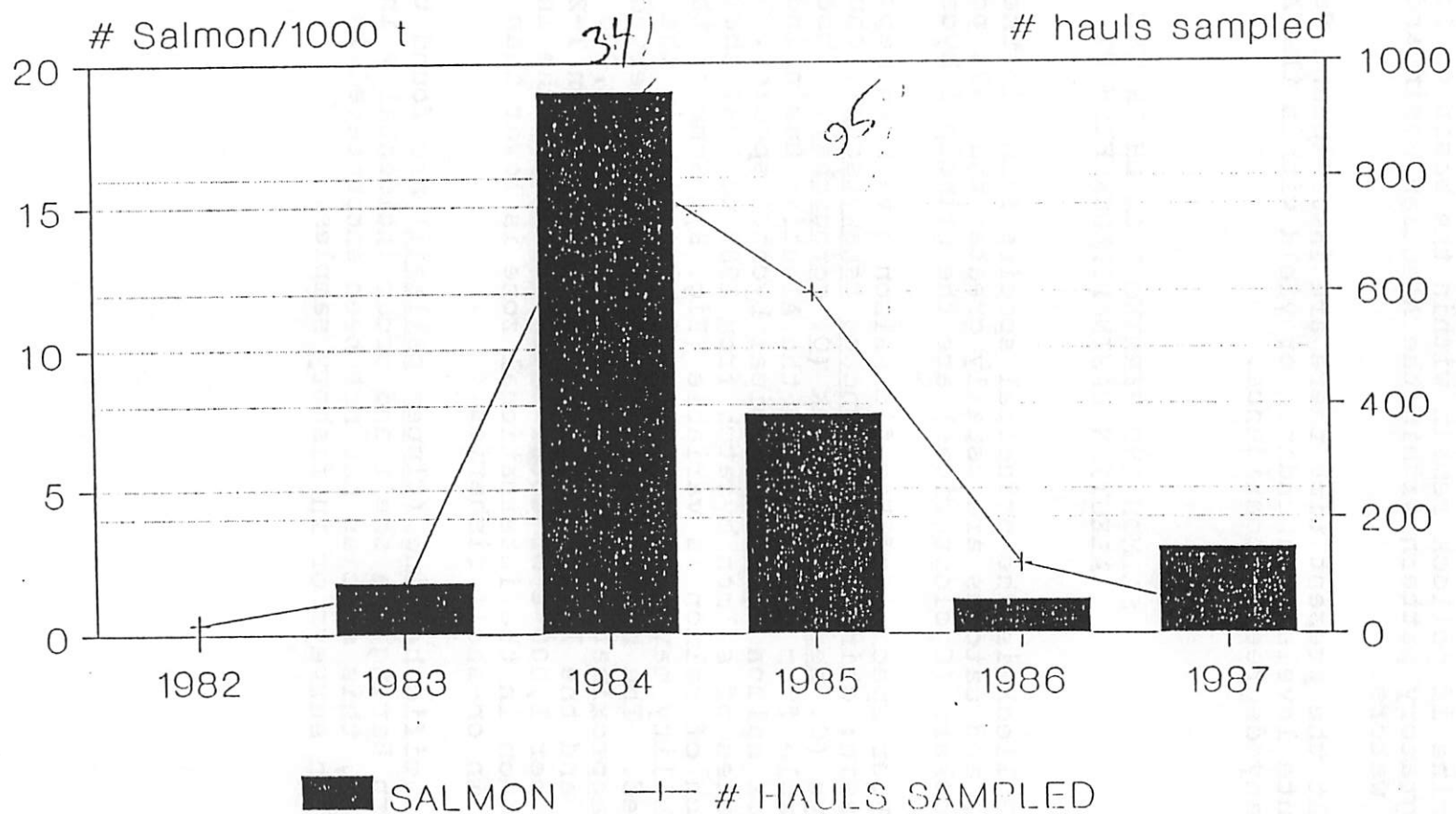
Pollock is the principal species found in the Aleutian Basin, and catches are usually greater than 99% pollock. Lump-suckers (Cyclopteridae) are the principal bycatch species.

Four species of Pacific salmon have been reported present in the basin: chinook (Oncorhynchus tshawytscha), chum (O. keta), sockeye (O. nerka), and pink (O. gorbuscha). Observations available from fisheries in the Aleutian Basin indicate that chinook salmon is the principal bycatch species. Observer estimates of salmon bycatch from 1982 to 1987 show that the bycatch of salmon is variable (Fig. 8). Some of the observed variability may be due to annual variation in the number of hauls sampled. The highest salmon bycatch rate observed was in 1983 when approximately 19 salmon were taken per 1,000 t of total catch and the lowest observed was in 1986 when 1-2 salmon were taken per 1,000 t of total catch. Overall, the incidental catch of salmon in the international zone is lower than the incidental catch in on-shelf fisheries.

Pacific herring (Clupea pallasii) are found throughout the eastern Bering Sea shelf and occur incidentally in trawl catches. However, this species has not been encountered in the Aleutian Basin in surveys or in fishery samples.

SALMON CATCHES IN DONUT

Number Salmon/1000 t total catch



Data from US Foreign Fishery Observers

Report on Observer Sampling in the Donut Hole

Prepared by
Michael Guttormsen

From 13 November through 10 December, observers were aboard U.S. fishing vessels conducting operations in the Donut hole. Observers sampled a total of 74 days aboard 10 vessels. During the sampling period, vessels made 89 tows, taking 852 metric tons (t) of groundfish.

Pollock made up 98.34% of the total catch. Bycatch consisted mostly of non-allocated species (1.37%) and squid (0.22%). The remaining bycatch species accounted for only 0.07% of the total catch. All species except pollock were discarded. Pollock was retained at a rate of 98.46%.

The incidental catch of prohibited species was limited to salmon. During the sampling period, an estimated 83 salmon were caught. Chinook salmon comprised 62.7% of the salmon catch and chum salmon made up the remainder. The incidental catch of salmon occurred at a rate of 0.097 per ton of groundfish. No marine mammals were taken during the sampling period, nor were any observed in the area.

Other nations observed fishing in the area were the U.S.S.R, the Republic of Korea, Poland, Japan, and the People's Republic of China. Observers reported between 50 and 100 foreign vessels fishing in the vicinity.

U.S. vessels averaged 11.5 t/day during the sampling period, with a CPUE of 0.7 t/hour and average catch of 9.6 t per tow. For other nations fishing in the Donut hole, only data from Poland is currently available. Polish vessels reported an average catch of 14 t/day and a CPUE of 1.4 t/hour.

Observers collected length frequencies of pollock. Lengths ranged from 41 to 59 centimeters. Pollock otoliths were also collected and will be analyzed at a later date.

Table 1.--Comparison of 1990 pollock catches in the EEZ and the Donut hole by the ten U.S. vessels that fished in the Donut Hole during November and December, 1990.

EEZ

<u>Dispensation</u>	<u>Total catch</u>	<u>Fishing Days</u>	<u>t/day</u>
Retained	442,336.0		282.2
Discarded	17,494.4		11.2
Total	459,830.4	1,567.2	293.4

Donut Hole

<u>Dispensation</u>	<u>Total catch</u>	<u>Fishing Days</u>	<u>t/day</u>
Retained	825.0		11.1
Discarded	12.9		0.2
Total	837.9	74.0	11.3

Note: Through December 22, 1990, the NMFS regional office in Juneau estimates that 1,384,473 metric tons of pollock had been taken by U.S. vessels in the U.S. EEZ. The ten vessels above account for 33% of that total.

Salmon and Pacific halibut are prohibited species which means they must not be retained by any vessel involved in the directed foreign or joint venture fishery. Between 1977 and 1988, the average catch rate of salmon in the foreign fishery was 1 salmon per 12 mt of whiting (0.086 salmon per mt of whiting, Table 18). Between 1978 and 1989, the joint venture vessels averaged about 1 salmon per 8 mt of whiting received (0.121 salmon per mt of whiting). In 1989, the joint venture catch of salmon was about one-third lower than in the previous year, and the catch rate was about one-third (1 salmon per 22 mt of whiting) the 1978-1989 average (1 salmon per 8 mt of whiting). Preliminary data for 1990 indicate that both the catch and catch rate of salmon in the joint venture are similar to 1989 levels. Generally, over 90 percent of the salmon taken in these fisheries are chinook. In the joint venture in 1989, 98 percent of the salmon were chinook, averaging 56.6 cm (22.25 inches) in fork length and 2.67 kg (5.9 pounds) in weight. Only 1.6 percent were coho, averaging 54.0 cm (21.2 inches) in fork length and 2.06 kg (4.5 pounds) in weight. Less than 0.1 percent were chum salmon in the 1989 joint venture.

Table 18. Catch of salmon in joint venture and foreign trawl fisheries for Pacific whiting.

	Salmon (number)	Whiting (mt)	Number of Salmon Per Mt Whiting	Mt Whiting Per Salmon
Joint Venture				
1978	19	856	0.022	45
1979	1,623	8,834	0.184	5
1980	3,602	27,537	0.131	8
1981	6,422	43,557	0.147	7
1982	11,694	67,465	0.173	6
1983	5,143	72,100	0.071	14
1984	10,192	78,889	0.129	8
1985	1,575	31,692	0.050	20
1986	32,051	81,639	0.393	3
1987	8,636	105,997	0.081	12
1988	13,984	135,781	0.103	10
1989	9,199	203,578	0.045	22
Average	8,678	71,494	0.121	8
1990 ^a	9,367	167,173	0.056	18
Foreign Trawl				
1977	14,627	127,013	0.115	9
1978	5,905	96,827	0.061	16
1979	7,044	114,910	0.061	16
1980	4,831	44,023	0.110	9
1981	5,052	70,366	0.072	14
1982	104	7,089	0.015	68
1983		No Fishery in 1983		
1984	63	14,772	0.004	234
1985	713	49,853	0.014	70
1986	11,739	69,861	0.168	6
1987	4,649	49,656	0.094	11
1988	2,185	18,041	0.121	8
Average	5,174	60,219	0.086	12
1989		No Foreign Fishery		
1990		No Foreign Fishery		

^a Incomplete; preliminary data through September 15, 1990.

Whiting catch in the 1989 and 1990 joint venture fisheries by area.

1989: 211,000 mt

INPFC Area	Whiting (mt) ^{1/}	Percent	Salmon ^{2/}	Percent
Vancouver (U.S. portion)	7,942	3.8	<100	1.1
Columbia	93,967	44.5	5,300	59.6
Eureka	107,284	50.8	3,600	40.4
Monterey	1,805	0.9	100	1.1

1990: 171,000 mt

INPFC Area	Whiting (mt) ^{1/}	Percent	Salmon ^{2/}	Percent
Vancouver (U.S. portion)	6,424	3.6	300	3.3
Columbia	103,830	58.0	2,900	31.5
Eureka	66,951	37.4	5,900	64.1
Monterey	1,830	1.0	<100	1.1

NOTE: 1990 salmon numbers are through June only. Numbers from later season not included.

- o "far north migrating" chinook stocks are primarily the upper Columbia River ("bright") stocks, Washington coastal stocks, and northern Oregon coastal stocks (down to about the Trask River/Tillamook area).
- o Chinook migrating to the far north would leave the Washington-Oregon area when they were still smaller than the average size intercepted in the whiting fishery.
- o The whiting fishery has ended in June the past two years, therefore salmon may be primarily stocks that do not migrate farther north.
- o The recent fishery has concentrated in the Eureka area and the southern part of the Columbia area, south of the Columbia River, which is south of the "far north" stocks.
- o Each October, Mike Dahlberg puts out an annual review of coded wire tag recoveries for INPFC. It includes location of interception and river of origin of the tag.

1/ Whiting landings by all gears including shoreside.

2/ Salmon numbers from joint venture fishery only.

DRAFT

JOINT STATEMENT ON SALMON BYCATCH
by the
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL,
ALASKA BOARD OF FISHERIES,
WASHINGTON DEPARTMENT OF FISHERIES,
and
OREGON DEPARTMENT OF FISH AND WILDLIFE

WHEREAS The North Pacific Fishery Management Council is composed of individuals from the states of Oregon, Washington, and Alaska, and has the responsibility and jurisdiction for the management of fishery resources within the 200-mile Exclusive Economic Zone in the North Pacific; and,

WHEREAS The Alaska Board of Fisheries is composed of individuals appointed by the State of Alaska to represent broad interests and geographic areas of Alaska, and has the responsibility and jurisdiction for the management of fishery resources within the Territorial Waters of the State of Alaska; and,

WHEREAS The Washington Department of Fisheries has the responsibility and jurisdiction for the management of fishery resources within the Territorial Waters of the State of Washington; and,

WHEREAS The Oregon Department of Fish and Wildlife has the responsibility and jurisdiction for the management of fishery resources within the Territorial Waters of the State of Oregon; and,

WHEREAS Salmon taken incidentally as bycatch in various fisheries under the jurisdiction of the Council and/or the Alaska Board of Fisheries have their origin in watersheds in Oregon, Washington, and Alaska; and,

WHEREAS The ceremonial and subsistence salmon fisheries, the directed commercial salmon fisheries, and the recreational and personal-use salmon fisheries of the three states have enormous social, economic and cultural importance; and,

WHEREAS Maintenance of the biological health and reproductive capacity of salmon stocks indigenous to the three states is essential to continued and improved salmon populations and the benefits derived from those stocks to these users; and,

WHEREAS There is increasing public inquiry and concern as to the intent of the managing agencies with respect to the bycatch of salmon in the various fisheries under their jurisdictions;

THEREFORE BE IT RESOLVED The North Pacific Fishery Management Council, the Alaska Board of Fisheries, the Washington Department of Fisheries, and the Oregon Department of Fish and Wildlife jointly declare that it is their desire to minimize, to the ~~maximum~~ extent feasible, the incidental take of salmon as bycatch in the fisheries under their respective jurisdictions in order to protect the biological health and reproductive capacity of the salmon species and the social, economic and cultural benefits derived from the harvest of salmon stocks within the three states; and,

BE IT FURTHER RESOLVED The North Pacific Fishery Management Council, the Alaska Board of Fisheries, the Washington Department of Fisheries, and the Oregon Department of Fish and Wildlife agree that in the event salmon bycatch in any of the fisheries under their respective jurisdictions becomes excessive, the responsible body will take appropriate steps to mitigate the excessive bycatch; and,

BE IT FINALLY RESOLVED The North Pacific Fishery Management Council, the Alaska Board of Fisheries, the Washington Department of Fisheries, and the Oregon Department of Fish and Wildlife agree to share information and otherwise work in furtherance of the goals of this Resolution.

Signed this ____ day of _____, 1991

For the North Pacific Fishery
Management Council:

For the Alaska Board
of Fisheries:

For the Washington Department
of Fisheries:

For the Oregon Department of Fish
and Wildlife:

DRAFT MINUTES

Bycatch Committee Meeting

March 1, 1991

The Council's Ad Hoc Bycatch Committee met on March 1, 1991, in Juneau, Alaska. Attending were Larry Cotter (Chair), Henry Mitchell, Clem Tillion, Rick Lauber, Mark Pederson, and Steve Pennoyer.

Canadian - U.S. Halibut Bycatch Concerns

Steve Pennoyer reviewed a resolution passed by IPHC. Canada's goal is to have U.S. groundfish fisheries reduce their bycatch within two years, by half, to the rates experienced by foreign fisheries. IPHC is anticipating that setline quotas will decrease by the mid-1990's to the point where bycatch is equivalent to the directed fishery quota.

IPHC has established a bycatch workgroup to examine halibut bycatch in all areas and report recommendations on measures to reduce bycatch rates. The workgroup will be chaired by Steve Pennoyer and Dick Beamish and will have technical experts from both countries. Technical experts will include Earl Krygier for ADF&G, Steve Davis for the Council, and one scientist each from the Center and Region staffs. The workgroup will make their final recommendations in June 1991.

The Bycatch Committee recommends that it proceed at its own pace. The Committee recommends that NMFS research pre-Magnuson Act regulations on foreigners and the rationale for the regulations, such as no fishing in the Horseshoe area or the Pot Sanctuary.

Revised Incentive Program

The revised incentive program, approved by the Council in November, has not been implemented yet. There have been specific concerns with developing sufficiently precise estimates of vessel bycatch rates, so that a vessel's performance could be compared to an established standard, and would hold up in court if the vessel were prosecuted. Any program that may be implemented by early April will be rudimentary and be more fully developed over time as sampling data and techniques improve. Draft regulations will be submitted to Washington, D.C. by March 8, with an interim final rule that would be effective immediately. There will be a public comment period and the bycatch committee will have the opportunity to review the regulations when they meet on March 21-22. If the Committee desires immediate Council action, they may recommend a Council teleconference by the end of March.

The Committee would like information developed on how Iceland and New Zealand have managed bycatch. Apparently Iceland has a penalty box program and New Zealand requires volumetric measurements of total catch in a gimble-mounted device. The Committee also would like a detailed report at the March meeting on sampling techniques and voluntary actions the industry can take to increase statistical significance and narrow confidence intervals. A briefing paper on this issue should be reviewed by the SSC sometime by the April meeting. The Committee also would like to discuss what limits are placed on advice that local field representatives can give observers on sampling vs referring these types of questions to Seattle. The Committee also will discuss how to help out the industry in formulating vessel incentive pools.

Salmon Bycatch

Galen Trumble reviewed the latest estimates of salmon bycatch in domestic groundfish fisheries. Trawl gear had taken 4,251 chinook salmon in the Gulf of Alaska by February 24 and 26,823 in the Bering Sea and Aleutians. These estimates were derived using observed bycatch rates multiplied times total groundfish harvest as estimated using product recovery rates.

Chinook bycatch was highest in area 517. The rate was low in 518, but vessels had to move out after the Bogoslof pollock quota was taken. Larger vessels had higher rates. Salmon caught in pelagic trawls averaged about 6 pounds; larger salmon (about 20 pounds) were found nearer the bottom. Data suggest that faster tows tend to catch more salmon.

Logbook data need to be examined to determine bycatch characteristics as a result of fishing characteristics such as the difference between night and day, tow speed, net design, etc. These data reside at the Alaska Fisheries Science Center. Possibly WDF could provide someone to examine the logbook data and provide insight into correlations between fishing patterns and bycatch.

The Committee would like to see a graph of bycatch throughout the year and how it may have varied with a change to new pelagic trawls compared to last year under the old design. Stomach samples also could provide insight into what the salmon are feeding on. The Committee also wants data on bycatch in the Pacific whiting fishery.

Dave Carlile and Dave Ackley, from ADF&G, reviewed estimates of salmon bycatch based on joint venture observer bycatch rate data applied to domestic catches for the last ten years. They noted that the increases in chinook catches beginning in 1986 reflect increased groundfish catch, not necessarily increased chinook bycatch rates. At the April Council meeting, they will report on bycatch patterns by one-half x 1 degree areas by time and month for 1989-1990. They will also update figures for 1990 using joint venture bycatch rates and DAP groundfish catches from mid-November through the end of the year.

ADF&G has two geneticists examining origin of stocks, but that information will not be available until two to three years from now.

The Committee asked for bycatch data from the Donut fisheries and bycatch information that might be available from past symposia, from foreign nations, etc. These need to be catalogued and presented to the committee. The Committee would like to know how many salmon have been taken, by fishery, gear type, area, EEZ or Donut, origin of salmon, stock strength. We should also consult with the Japanese on how they decreased their bycatch rates in response to amendment 3 to the BSAI plan in 1983. The Council should sponsor a forum to bring together industry and Japanese experts on how to decrease chinook bycatch.

Committee asked NMFS to draft a paper on the data management process and provide briefings to the Committee on how changes are made to salmon and halibut bycatch on the bulletin board.

Joint Statement on Salmon Bycatch

The Committee made minor revisions and broadened the statement to include Washington and Oregon. The statement should be forwarded to Joe Blum and Bob Mace for review.
For Bycatch Meeting in March

DRAFT

JOINT STATEMENT ON SALMON BYCATCH
by the
**NORTH PACIFIC FISHERY MANAGEMENT COUNCIL,
ALASKA BOARD OF FISHERIES,
WASHINGTON DEPARTMENT OF FISHERIES,
and
OREGON DEPARTMENT OF FISH AND WILDLIFE**

WHEREAS The North Pacific Fishery Management Council is composed of individuals from the states of Oregon, Washington, and Alaska, and has the responsibility and jurisdiction for the management of fishery resources within the 200-mile Exclusive Economic Zone in the North Pacific; and,

WHEREAS The Alaska Board of Fisheries is composed of individuals appointed by the State of Alaska to represent broad interests and geographic areas of Alaska, and has the responsibility and jurisdiction for the management of fishery resources within the Territorial Waters of the State of Alaska; and,

WHEREAS The Washington Department of Fisheries has the responsibility and jurisdiction for the management of fishery resources within the Territorial Waters of the State of Washington; and,

WHEREAS The Oregon Department of Fish and Wildlife has the responsibility and jurisdiction for the management of fishery resources within the Territorial Waters of the State of Oregon; and,

WHEREAS Salmon taken incidentally as bycatch in various fisheries under the jurisdiction of the Council and/or the Alaska Board of Fisheries have their origin in watersheds in Oregon, Washington, and Alaska; and,

WHEREAS The ceremonial and subsistence salmon fisheries, the directed commercial salmon fisheries, and the recreational and personal-use salmon fisheries of the three states have enormous social, economic and cultural importance; and,

WHEREAS Maintenance of the biological health and reproductive capacity of salmon stocks indigenous to the three states is essential to continued and improved salmon populations and the benefits derived from those stocks to these users; and,

WHEREAS There is increasing public inquiry and concern as to the intent of the managing agencies with respect to the bycatch of salmon in the various fisheries under their jurisdictions;

THEREFORE BE IT RESOLVED The North Pacific Fishery Management Council, the Alaska Board of Fisheries, the Washington Department of Fisheries, and the Oregon Department of Fish and Wildlife jointly declare that it is their desire to minimize, to the ~~maximum~~ extent feasible, the incidental take of salmon as bycatch in the fisheries under their respective jurisdictions in order to protect the biological health and reproductive capacity of the salmon species and the social, economic and cultural benefits derived from the harvest of salmon stocks within the three states; and,

BE IT FURTHER RESOLVED The North Pacific Fishery Management Council, the Alaska Board of Fisheries, the Washington Department of Fisheries, and the Oregon Department of Fish and Wildlife agree that in the event salmon bycatch in any of the fisheries under their respective jurisdictions becomes excessive, the responsible body will take appropriate steps to mitigate the excessive bycatch; and,

BE IT FINALLY RESOLVED The North Pacific Fishery Management Council, the Alaska Board of Fisheries, the Washington Department of Fisheries, and the Oregon Department of Fish and Wildlife agree to share information and otherwise work in furtherance of the goals of this Resolution.

Signed this ____ day of _____, 1991

For the North Pacific Fishery
Management Council:

For the Alaska Board
of Fisheries:

For the Washington Department
of Fisheries:

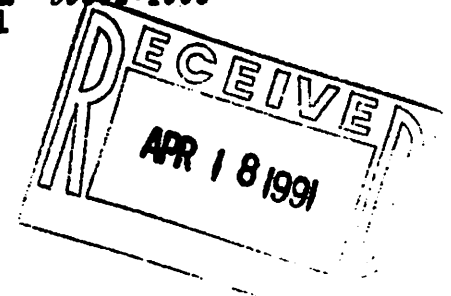
For the Oregon Department of Fish
and Wildlife:

APR 17 '91 16:40 N.M.F.S.-AK(907)586-7131

APRIL 1991
SUPPLEMENTAL



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668
April 17, 1991



Clarence Pautzke, Executive Director
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, AK 99510

Dear Clarence:

Item D-1(a)(1) on the Council's April 23-26, 1991 agenda, is titled "Review performance of new pelagic trawls". As background the Council needs the following information.

NMFS closed the "other fishery" in Zones 1 and 2H in the Bering Sea/Aleutians (BSAI) on February 17 to further trawling other than with pelagic trawls. The closure was required, because the primary Pacific halibut allowance of 1,200 mt apportioned to the "other fishery" had been reached. We also closed the entire BSAI on March 8, to further trawling with other than with pelagic trawls when the secondary Pacific halibut allowance of 1,455 mt was reached. Pelagic trawls were still allowed, because their design was believed to release most bycatches of Pacific halibut. We expected trawling for Pacific cod would be curtailed, because bottom trawls were prohibited. On April 1, the second quarter's Pacific halibut allowance of 1,293 mt was made available, and bottom trawling for Pacific cod resumed.

We understand that some Pacific cod trawl fishermen adjusted to the closures by attaching a newly designed forward section to their bottom trawls. This attachment resulted in a trawl configuration that agreed with the definition of a pelagic trawl, but which impeded the release of halibut bycatch otherwise expected of pelagic trawls.

We compared the trawl halibut bycatch rate in Zones 1 and 2H through February 17 when bottom trawls were allowed and after February 17 when only pelagic trawls were allowed. We made the same comparisons for outside Zones 1 and 2H before and after March 10 (nearest week ending date to the March 8 closure). These comparisons, expressed as a percent of halibut tonnage per metric ton of groundfish in a Pacific cod target fishery, are shown as follows:

	Before closure	After closure
Zones 1 & 2H (2/17 closure)	2.697	2.743
Outside Zones 1 & 2H (3/8 closure)	1.747	0.122

For Zones 1 and 2H, we believe the bycatch rate after February 17 was the same, if not worse, than before the closure. Outside Zones 1 and 2H, the rate after March 10 is almost an order of magnitude better than before the closure, and might be the result of vessels using true pelagic trawl gear.



At this time, the definition of a pelagic trawl is not working as intended with respect to lowering bycatch rates of Pacific halibut. To allow further trawling for Pacific cod with pelagic trawls once the halibut bycatch allowance, or seasonal apportionments thereof, are reached would be inconsistent with the BSAI FMP. Accordingly, we have changed regulations such that all trawling for Pacific cod will be prohibited once the primary or secondary seasonal halibut allowances, or the seasonal apportionments thereof, are reached.

Fishing for pollock with pelagic trawls will be allowed, even though trawling for Pacific cod will be prohibited. We are concerned, however, that the directed fishing standard for Pacific cod in a pollock fishery is too high. Fishermen could catch substantial amounts of pollock with a true pelagic trawl, switch to a reconfigured pelagic trawl, resume fishing for Pacific cod close to the sea bed, and catch up to 20 percent Pacific cod as measured against the amount of pollock on board. By doing so, they could catch significant amounts of Pacific halibut bycatch.

The Council could address this potential problem in the Bering Sea/Aleutians by recommending that NMFS implement an emergency rule to amend the directed fishing standard for Pacific cod by reducing the proportion of Pacific cod that would be allowed to be retained while trawling for other species categories (e.g. pollock) with pelagic trawls. We recommend a proportion of 2 percent, which is the proportion of Pacific cod achieved while fishing for pollock with pelagic gear during 1990 after the "other fishery" was closed to other than pelagic gear after June 30, 1990. This proportion would allow a natural bycatch retention of Pacific cod in a pelagic trawl pollock fishery while removing the economic incentive to top off their retained pollock catches with high value Pacific cod. The existing standard of 20 percent for Pacific cod in a pollock fishery would remain unchanged when bottom trawling for pollock is allowed.

The same problems associated with pelagic gear are expected to occur in the Gulf of Alaska. Current regulations require closure to trawling with other than pelagic trawls when the halibut PSC allowance apportioned to trawl gear is reached. Vessels could resume fishing with modified pelagic trawls, e.g. for flatfish, thereby catching more halibut. The Council might consider recommending an emergency rule, which would prohibit all trawling for groundfish, except for pollock. The directed fishing standards for certain bottom species should be reduced in a pollock fishery using modified pelagic trawls to prevent topping off with high value species, which could worsen the halibut bycatch. We reviewed the 1990 database for groundfish caught with pelagic gear during July through October 19 when pollock became a prohibited species. The data show that a directed

fishing standard of 7 percent for all other groundfish should be adequate in a pelagic gear fishery for pollock.

We expect that an emergency rule containing the above measures could be effective in early June and likely would be in effect for two 90-day periods. We also would initiate regulatory amendments to make these measures effective for 1992 and beyond.

Sincerely,



Steven Pennoyer,
Director, Alaska Region



UNITED STATES DEPARTMENT OF NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

AGENDA D-1(a)(3)
APRIL 1991
SUPPLEMENTAL

April 17, 1991

Clarence Pauztko, Executive Director
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, AK 99510

Dear Clarence:

We anticipate the vessel incentive program to reduce prohibited species bycatch rates in specified groundfish trawl fisheries will be implemented by the end of April. At its December, 1990 meeting, the North Pacific Fishery Management Council (Council) recommended 1991 bycatch rate standards for the Bering Sea/Aleutians (BSAI) and Gulf of Alaska (GOA) Pacific cod fisheries, the BSAI flatfish fishery, and the GOA bottom rock fish fishery (attached). Under the incentive program, a vessel's monthly bycatch rate of halibut while participating in any of these fisheries and of red king crab while participating in the BSAI flatfish fishery must not exceed the bycatch rate standard specified for those fisheries.

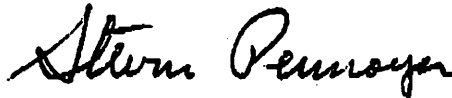
Regulations that would implement the incentive program require the Regional Director to publish a notice in the Federal Register specifying bycatch rate standards for the fisheries monitored under the incentive programs prior to January 1 and July 1 of each year. The interim final rule implementing the incentive program specifies the Council's recommended bycatch rate standards for the first half of 1991. The Council should review its recommendations for the second half of 1991 and either revise or support those recommendations for publication in the Federal Register prior to July 1 of this year.

With the exception of 1991 bycatch rates observed to date, little additional information exists for Council guidance on appropriate bycatch rate standards for the second half of 1991. Table 1 lists average bycatch rates for 1990 and 1991, by quarter, in the fisheries that will be included in the incentive program. In general, halibut bycatch rates are higher in 1991 relative to 1990, but red king bycatch rates in the 1991 BSAI flatfish (rocksole) fishery are lower. The increase in 1991 halibut bycatch rates is probably due to a number of factors, including changes in fishing patterns and effort and an increased incentive to harvest groundfish rapidly before attainment of seasonal halibut bycatch allowances or groundfish quotas trigger area closures. Although observers are reporting large numbers of small halibut in the BSAI trawl fisheries, these numbers alone do not account for the increase in halibut bycatch rates (kilograms halibut/metric tons groundfish).



We recommend that the Council consider maintaining the 1991 bycatch rates standards adopted at its December, 1990 meeting, recognizing that those bycatch standards may be revised when deemed appropriate by the Regional Director through notice in the Federal Register. The Council did not, however, recommend halibut bycatch rate standards for the BSAI Pacific cod fishery for the second half of 1991. We recommend, therefore, that the Council consider setting the bycatch rate standard for this fishery at the average 1991 bycatch rate observed through March 31, or 2.2 percent.

Sincerely,



Steven Pennoyer,
Director, Alaska Region

Table 1. Average bycatch rates in 1990 and 1991, by quarter, of halibut and red king crab in the fisheries included in the incentive program.

Halibut bycatch as a percentage of allocated groundfish catch

Fishery and quarter	1990	1991
BSAI Pacific cod		
Qt 1	1.35	2.23
Qt 2	1.85	
Qt 3	-	
Qt 4	-	
BSAI flatfish		
Qt 1	1.31	1.58
Qt 2	-	
Qt 3	0.17	
Qt 4	0.19	
GOA rockfish		
Qt 1	2.91	9.43
Qt 2	3.31	
Qt 3	1.96	
Qt 4	0.54	
GOA Pacific cod (Central GOA rates)		
Qt 1	7.55	1.58 (1.31 GOA-wide)
Qt 2	11.11	
Qt 3	3.24	
Qt 4	5.15	

Zone 1 red king crab bycatch rates
(number of crab/mt of allocated groundfish)

Fishery and quarter	1990	1991
BSAI flatfish		
Qt 1	2.74	0.99
Qt 2	-	
Qt 3	0.46	
Qt 4	0.01	

Attachment 1. Bycatch rate standards recommended by the NPFMC at its December, 1990 meeting.

Table 1-- Bycatch rate standards proposed for the 1991 vessel incentive program in the BSAI and GOA by fishery and quarter (third and fourth quarter standards are preliminary).

Halibut bycatch as a percentage of allocated groundfish catch

Fishery and quarter	1991 bycatch standard
BSAI Pacific cod	
Qt 1	1.35
Qt 2	1.85
BSAI flatfish	
Qt 1	1.31
Qt 2 - 4	0.30
GOA rockfish	
Qt 1 - 4	4.00
GOA Pacific cod	
Qt 1	3.31
Qt 2	4.13
Qt 3	3.29
Qt 4	5.15

Zone 1 red king crab bycatch rates
(number of crab/mt of allocated groundfish)

Fishery and quarter	1991 bycatch standard
BSAI flatfish	
Qt 1	2.88
Qt 2-4	1.50

JAY D. HASTINGS

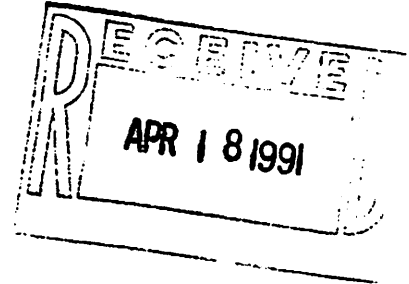
ATTORNEY AT LAW

SUITE 3306
1111 THIRD AVENUE
SEATTLE WASHINGTON 98101

April 17, 1991

(206) 467-9793
TELEX: 38-0024
ANSEL FORTER LAW MEA

Mr. Clarence Pautzke
Executive Director
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, Alaska 98510



Dear Clarence:

Following the receipt of your letter dated March 11, I communicated with the Japanese trawl associations to determine if we could find a qualified representative of the Japanese fleet to participate in a Council workshop and explain fishing techniques used to reduce bycatch under the amended Bering Sea and Aleutian Islands groundfish plan during the mid-1980s. Unfortunately, we were unable to find a fishing master or vessel captain available and willing to participate. Many of these people are no longer in the industry and those remaining are engaged in new or supplemental endeavors requiring their full attention. However, during our correspondence by facimile and phone, I did receive a number of comments which we thought may be helpful in addressing the U.S. bycatch problem.

The Japanese fishing master and captain for each vessel developed their own techniques for avoiding bycatch under Amendment 3. These techniques were developed based upon the physical conditions of the fishery and within a management framework which both encouraged and permitted bycatch levels to be reduced. Fishing methods were modified depending upon current physical conditions surrounding the fishery. These modifications were conventional. They included adjustments in trawling depth and speed, gear modifications and shifts in fishing times and areas. The Japanese do not believe there are any particular techniques or secrets which can be explained to the Council. The modifications were the result of experimentation and years of experience in the fishery.

But we do note changes in the fishery and its management which are substantially different from the mid-1980s. It is our understanding that some of the bycatch resources have increased in abundance which may affect bycatch rates. But more importantly, the bycatch management framework within which the U.S. fleet operates is quite different from the framework within which the Japanese fleet operated. The Japanese government and industry developed an internal allocation management framework which forced a reduction in

Mr. Clarence Pautzke
April 17, 1991
Page 2

bycatch rates but allowed the Japanese vessels to make the necessary adjustments in the most efficient manner.

Under the Japanese management framework, the national allocation for each directed and bycatch species was first allocated among three Japanese vessel associations with member vessels licensed to fish in the U.S. zone. Each association would then further allocate each species among the member vessels on a vessel-by-vessel basis. This vessel allocation system forced each vessel to maintain its bycatch within the vessel allocation for that species. There was no common pool for either directed or bycatch species from which a vessel could fish and there was no internal reserve established to provide relief should a vessel exceed its allocation. If the vessel allocation was exceeded for any one species for which the vessel had an allocation, the vessel had to return to port.

This rigid self-imposed allocation scheme helps explain why the Japanese bycatch rates were so low. Japanese fishing masters had to be conscious of their bycatch rates at all times to keep the bycatch well within the vessel allocation and ensure an adequate margin of safety for continued vessel operations. Otherwise, the vessel could be prematurely eliminated from the fishery with only a few bad tows. The result was an accumulated savings by the entire fleet. Similar savings would not seem possible under the current system wherein the total bycatch only is monitored and the fishery is closed when that bycatch allocation is reached.

A specific example may be more meaningful. In 1985 Japan received a 199 mt allocation of sablefish in the Bering Sea for bycatch only. This 199 mt was further allocated among the Japanese vessels licensed for the U.S. fishery. One particular smaller trawl vessel received an internal vessel allocation of 1.48 mt of sablefish for the entire year. The highest rate of incidence of sablefish, when taken, was experienced in the turbot fishery for which the vessel had an allocation of 508 mt. Through September of 1985 the turbot catch was 461.1 mt. Yet the total incidental catch of sablefish was only .84 according to the vessel reports and .695 according to the observer reports. By October 5th of that year the entire Japanese fleet had taken only about 56 mt of sablefish from the total 199 mt allocation. The system forced each vessel to minimize bycatch rates in order to ensure continued operations within vessel limits.

I can still recall severe internal repercussions resulting from this management system. If a vessel was approaching its bycatch allocation for a certain species, the pressure was really put on the vessel to make the adjustments necessary or leave the fishery when the vessel bycatch

Mr. Clarence Pautzke
April 17, 1991
Page 3

allocation was reached. Observer reports were also monitored carefully and we would immediately contact the observer program if we felt adjustments in the observer reports were warranted. It was also possible for vessel owners to purchase unused bycatch allocations from other Japanese vessels. But this opportunity was rare since the Japanese vessel operators did not want to give up any allocations received even though the vessel may have fished only a few days during the year. When all else failed, the vessel was ultimately forced out of the fishery when its allocation was utilized.

Although the system was severe on bycatch, it provided the opportunity for each vessel to develop its own fishing plan to ensure efficiency in the utilization of its allocations throughout the year. This opportunity was provided through the similar allocation of target species on a vessel-by-vessel basis. The Japanese management philosophy underlying this allocation system was to eliminate the competition for resources on the fishing grounds. Each vessel could develop its own season for fishing based upon a combination of marketing, resource and vessel allocation factors. The vessel could then pursue its fishery plan at its own pace without fear that target fisheries would be closed before its individual vessel allocations would be harvested. We note that under the current Olympic management system, the second season of the Bering Sea pollock fishery will begin on June 1 when the condition of the pollock resource is not optimal for surimi production and the incidental catch of herring in the Unimak Pass area will probably be very high. Yet the U.S. fleet will be forced to fish. This type of management system is most perplexing to Japan.

I know that there are other factors which may account for the Japanese ability to reduce bycatch rates. But I hope this letter is helpful to the Council. Again, I am sorry that we are unable to find a Japanese fishing master who can participate in a workshop. If the Council is still interested in studying the Japanese techniques, we would suggest sending a researcher to Japan. We would be quite pleased to assist the researcher and make all the arrangement necessary to ensure a successful research project. But I still think the real answer to the problem lies in the ability of the U.S. government and industry to work together and develop a system which makes each vessel accountable for its own bycatch.

Sincerely,


Jay D. Hastings

WESTERN ALASKA COOPERATIVE MARKETING ASSOCIATION

(907) 842-5592 • BOX 213 • DILLINGHAM, ALASKA 99576

April 19, 1991

Mr. Rick Lauber, Chairman
North Pacific Fishery Management Council
Mr. Larry Cotter, Chairman Ad Hoc
Bycatch Committee
Mr. Clarence G Pautzke, Executive
Director

Gentlemen:

Our organization supports the Alaska Crab Coalition's proposal to expand the no trawl zone in zone one from 160° to 165° South of 58° North.

We believe that this will improve the overall protection of crab and halibut habitat and reduce bycatch in this zone. The new statistical information justifies this expansion.

If you have any questions regarding our letter of support please do not hesitate to contact our office.

We sincerely hope that the council will approve this proposal.

Sincerely,


Harold "Harvey" Samuelson
President



ADVISORY BOARD

April 16, 1991

Clarence Pautzke
North Pacific Fisheries Management Council
P.O. Box 103136
Anchorage, AK 99510

Dear Mr. Pautzke,

The Kenai River Special Management Area (KRSMA) Advisory Board is very concerned with the North Pacific trawl fleet's by catch of Kenai River chinook salmon.

The Kenai River supports the largest chinook salmon sport fishery in the State of Alaska, with the related tourism economies of the Soldotna-Kenai area directly related to this popular sport fishery. This world class trophy sport fishery is recognized as home to the largest sport caught chinook weighing in at 97 lb, 4 oz. This distinction further fuels the importance of this sport fishery to the recreating public and the tourism dependent economies.

Unfortunately, the Kenai River chinook sport fishery has been in conflict with a healthy commercial sockeye salmon fishery, and recent declining chinook salmon runs have exacerbated this situation. The decline in Chinook salmon returns is a concern for the members of the KRSMA Advisory Board for both biological stock integrity as well as the impact on the recreational visitors and sport anglers.

In July, 1989, the Kenai River chinook salmon escapement goals were not met. During 1990, a three week closure of the chinook sport fishery in June was ordered, and still escapement goals were not met. The July 1990 season was shortened and the escapement was only met after the emergency closure. These closures had a significant impact on the local sportfish related tourism economy, as well as the quality of recreational experiences of Kenai River visitors.

The KRSMA Advisory Board has a comprehensive list of objectives in its dealings with the unique river system; among other goals, this board is charged with promoting the protection of resources of the KRSMA including its use fishery and outdoor recreation opportunities. The board also helps to provide a forum for the collection and expression of public opinions and recommendations on matters relating to the KRSMA.



Kenai Area Office, Box 1247, Soldotna, AK 99689, Soldotna 262-6601
Kenai Peninsula Borough, Box 820, Soldotna, AK 99689, Soldotna 262-4441

Alaska Division of Parks and Outdoor Recreation, Department of Natural Resources, in cooperation with the Kenai Peninsula Borough.



North Pacific Fisheries Management Council
April 16, 1991

2

Therefore, since the by catch of Kenai River chinook salmon by North Pacific trawlers has potentially devastating affects on the Kenai River sport fishery, with direct negative affect on the local economy and recreational opportunities, the KRSMA Advisory Board unanimously urges your council to take our concerns under consideration when the management of the controversial trawl fishery is addressed.

Sincerely,

Sam McLane
Sam McLane, President
KRSMA Advisory Board

cc: Kenai River SMA Advisory Board Members

SM:st

D-1(a)7

Petersburg Fish and Game
Advisory Committee
P.O. Box 707
Petersburg, Ak. 99833

April 16, 1991

Mr. Mike Martin, Chairman
Alaska Board of Fisheries
13300 Venus Way
Anchorage, Ak. 99515

Dear Mr. Martin,

The Petersburg Fish and Game Advisory Committee urges the Board of Fisheries to assist the North Pacific Fisheries Management Council in any and all means possible to stop the trawler's high seas by-catch of king salmon.

Neither the resource nor the fishing industry can long survive such intolerable waste. It must be stopped.

Sincerely, *Gary McCullough*

Gary McCullough
Chairman Pro-Tem

- cc:
- NPFMC
- Governor Hickel
- Commissioner Rosier
- Clem Tillion
- Senator Jones
- Senator Eliason
- Representatives:
- Grussendorf
- Taylor
- Davis