


MEMORANDUM

TO: Council, SSC, and AP Members

FROM: Clarence G. Pautzke
Executive Director 

DATE: January 9, 1990

SUBJECT: General Groundfish

ACTION REQUIRED

Select groundfish proposals for further development.

BACKGROUND

Forty-five groundfish proposals have been received for consideration for the 1990 amendment cycle. There were no proposals on the extended cycle from last year. Copies were sent to you December 27. The groundfish teams reviewed the proposals on November 15; the Plan Amendment Advisory Group (PAAG) did so on January 4, 1990. The PAAG also discussed alternative solutions, determined whether a plan or regulatory amendment was needed, and recommended priorities for Council action in light of staff availability. PAAG and team recommendations are provided in item D-1(a)(1).

The PAAG recommends higher priority for five issues during 1990, presented below in descending order in case staff availability limits the number that can be addressed.

- *** Define overfishing in the GOA and BSAI
- *** Develop a bycatch management program for the BSAI
- ** Develop revised bycatch management measures in the GOA
- * Apportion TAC by season in the GOA and BSAI
- * Open the sablefish season in April or June in the BSAI

Several others also are high priority, and some may be developed as regulatory amendments. The PAAG is hopeful that agencies other than the Council and NMFS can prepare the accompanying analyses.

Proposals selected for further development will come back to the Council in April for approval for public review. Final action will occur in June. If proposals are placed on an extended cycle, we will need to establish a schedule for their development and review. Proposals identified as regulatory amendments will be prepared by NMFS, reviewed by the Council if requested, and submitted for Secretarial review.

In January 1989 the NMFS Regional Office volunteered to begin work on merging the GOA and BSAI groundfish FMPs. An outline of such a revised and merged plan is under item D-1(a)(2). Should the Council wish to proceed with this work effort, NMFS is available to answer questions.

BSAI Bycatch Management

Proposed replacements for Amendment 12a are highly complex and will require extensive analysis. The plan team has developed the alternative approaches listed in item D-1(a)(3). Council advice is requested to ensure these are the appropriate alternatives to analyze.

Plan Amendment Advisory Group
 Recommendations for Groundfish FMP Amendments
 In 1990 Cycle

Priority	Proposal Number	Description	Notes
<u>Place on current plan amendment cycle:</u>			
***	1	Overfishing Def'n	Required by 602 guidelines
***	25,34-36, 38,41	BSAI Bycatch	Amendment 12a sunsets 12/90; it is assumed the State of AK will perform EA/RIR analyses for herring & salmon bycatch
**	28-33,38	GOA Bycatch	In the GOA, (a) develop reg. amdt. to permit apportionment of halibut PSC by gear, by fishery, by season, and by individ. operator, and (b) develop plan amdt. to provide authority to establish a PSC reserve system and to permit retention of halibut in longline fisheries
*	45	Seasonal Apportionment of TACs	
	26	Define bottom and mid-water trawls	Assumes minimal analytic effort: 1 line change to FMPs and implementation by regulatory amendment
	4	Cost recovery program for observer program	Develop if included in MFCMA reauthorization

*xx 15
 xx long bycatch*

The PAAG expressed concern that limitations on both Council and NMFS/AFSC staff may constrain the topics analyzed to only those of the very highest priority and urgency (marked ***).

Develop as a regulatory amendment:

- * 12. Sablefish opening in BSAI
on June 1 or April 1

Include in current amendment cycle on the assumption that the listed agency will perform the EA/RIR analysis:

3. Interim groundfish specifications (NMFS/Region)
5. Re-align BSAI management areas (AFSC)
to include a) eastern Bering Sea,
b) Aleutian Basin, and c) Aleutian
Islands
27. Require biodegradable panels on (NMFS)
groundfish pots (BSAI plan amdmt.
if required; reg, amdmt. in GOA)
42. Management of demersal shelf (ADF&G)
rockfish (GOA FMP)

Develop as Council policy rather than plan amendment; seek SSC recommendations in January:

16. Experimental/exploratory
fishing outside TAC

Place on extended cycle:

- 21,23 Define/restrict trawl cod Additional
end mesh sizes research needed
before analysis
can be completed.

The PAAG determined that the other proposals were of low or moderate priority and given current constraints, shouldn't be addressed in the current cycle.

Plan Team and PAAG Evaluation of Proposals for 1990 Groundfish FMP Amendment Cycle (for both Gulf of Alaska and Bering Sea/Aleutian Islands).

Proposal Number (Applicable FMP)	Proposal Description	Action Required	Amendment (Plan Team)	Priority 1/ (PAAG)	Comments
Administrative					
* 1. (GOA,BSAI)	Define overfishing	Plan amendment	High	High	602 guidelines require by 1991
2. (GOA,BSAI)	Affirm/modify FMP management objectives/goals	Plan amendment	High	Medium	Council request
3. (GOA,BSAI)	Develop procedures to set interim specifications	Plan amendment	High	High	NMFS request
4. (GOA,BSAI)	Implement a data gathering cost recovery program	Plan amendment	High	High	If MFCMA is reauthorized
Management Areas					
5. (BSAI)	Change management areas to EBS, AI, & Aleutian Basin	Plan amendment	Medium	High	Combine with #6
6. (GOA,BSAI)	Change management area boundaries	Plan amendment	Medium	Medium	Combine with #5
Observers					
7. (GOA,BSAI)	Implement 100% harvesting/processing observer program	Regulatory	Low	Low	100/30% coverage already established
Roe Stripping					
8. (GOA/BSAI)	Prohibit pollock roe stripping	None	N/A	N/A	Amendment 19/14 in preparation
Fishing Period/Fishing Year					
9. (GOA)	Set preannounced openings for sablefish LL fishery	Regulatory	Low	Low	May be unnecessary with ltd. entry
10. (GOA)	Change beginning of pollock accounting year to April 1	Plan amendment	Low	Low	Amtd. 19/14 in progress
11. (GOA)	Prohibit "other rockfish" trawling until July 1	Regulatory	Medium	Medium	Defer to bycatch issues in #28-31,33
12. (BSAI)	Open sablefish fishery in June, or April 1 as in GOA	Regulatory	High	High	Depends on Cncl. action on ltd. entry
13-14. (BSAI)	Open yellowfin sole fishery July 1	Regulatory	Medium	Medium	Defer to bycatch issues in #34
15. (GOA,BSAI)	Prohibit LL fishing 3 days before sablefish LL opening	Regulatory	Medium	Medium	
Experimental Fishery					
16. (GOA,BSAI)	Allow experimental/exploratory fishing outside ABC/TAC	Policy	High	High	SSC develop guidelines; revisit in June
Access Limitation					
17. (BSAI)	Provide preference to AK Natives/ltd. access regimes	MFCMA amdmt?	Policy	N/A	Defer to groundfish ltd. access
18. (GOA,BSAI)	Establish an apprenticeship program	Plan amendment	N/A	N/A	Refer to Council's FPC
19. (GOA,BSAI)	Establish an ITQ system	Plan amendment	N/A	N/A	Refer to Council's FPC
Gear Restrictions					
20. (GOA)	Define/control use of factory trawlers	Plan amendment	N/A	N/A	Combine with #24; inshore/offshore
21. (GOA)	Require 5 inch or greater mesh/pollock trawls	Plan amendment	High	High	Combine with #23; seek SSC advice
22. (GOA)	Prohibit trawling in eastern Regulatory Area	Plan amendment	Low	Medium	Allocation issue
23. (GOA)	Define/restrict cod end mesh sizes in trawl fisheries	Plan amendment	High	High	Combine with #21; seek SSC advice
24. (BSAI)	Define/control use of factory trawlers	Plan amendment	N/A	N/A	Combine with #20; inshore/offshore
25. (BSAI)	Prohibit bottom trawling in IPHC Area 4C	Plan amendment	High	High	Combine with BSAI bycatch, #34-36,41
26. (GOA,BSAI)	Define/specify to fishery midwater and bottom trawls	Plan amendment	High	High	
27. (GOA,BSAI)	Require biodegradable panels on groundfish pots	Plan amendment	High	High	Amend BSAI FMP only; GOA by reg. am.

Bycatch Management

28.	(GOA)	Develop improved halibut bycatch management measures	Plan amend/reg	High	High	Combine 28-31,33 2/
29.	(GOA)	Establish halibut PSC reserve system	Plan amendment	High	High	Combine 28-31,33 2/
30.	(GOA)	Apportion longline halibut PSC cap quarterly	Regulatory	High	High	Combine 28-31,33 2/
31.	(GOA)	Establish halibut PSC reserve/allocate cap quarterly	Plan amendment	High	High	Combine 28-31,33 2/
32.	(GOA)	Allocate halibut PSC cap by Regulatory Area	Notice	N/A	N/A	Have authority to do this now
33.	(GOA)	Allocate halibut PSC cap by season	Regulatory	High	High	Combine 28-31,33 2/
* 34.	(BSAI)	Replace amendment 12a crab bycatch controls	Plan amendment	High	High	Combine with #41
35.	(BSAI)	Establish chinook salmon PSC cap	Plan amendment	High	High	State of AK concerned; extended cycle
36.	(BSAI)	Establish herring PSC cap	Plan amendment	High	High	Major State of AK concern
37.	(GOA,BSAI)	Establish depletion funding system for PSC species	MFCMA amdmt?	N/A	N/A	Relates to #4,28-31,33 (disincentives)
38.	(GOA,BSAI)	Manage halibut bycatch/single PSC cap for No. Pacific	Plan amendment	High	High	Consider with #28-31,33,34-36,41
39.	(GOA,BSAI)	Permit retention of halibut bycatch	Plan amendment	Low	Low	Combine with #28
40.	(GOA,BSAI)	Re-evaluate bycatch species mortality rates	Policy/Research	N/A	N/A	Work in progress by IPHC
* 41.	(GOA,BSAI)	Develop revised bycatch management measures	Plan amendment	High	High	Consider with 28-31,33,34

Rockfish Management

42.	(GOA)	Expand management measures/demersal shelf rockfish	Plan amendment	High	High	Council deferred in 1988,1989 cycles
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TAC Apportionment/Change

43.	(GOA)	Provide for seasonal apportionment of pollock TAC	Plan amendment	N/A	N/a	Under consideration in Amdmt. 19/14
44.	(GOA,BSAI)	Provide authority for RD to increase TAC in-season	Plan amendment	Low	Low	
45.	(GOA,BSAI)	Provide for seasonal apportionment of TAC	Plan amendment	High	High	

* Must be analysed in 1990 cycle

1/ N/A - no action recommended because issue can be or already is covered under other Council programs.

2/ PAAG recommends regulatory amendment to permit apportionment of halibut PSC limits by gear type, by fishery, by season, and by individual operation in GOA. PAAG also recommends plan amendment to provide authority to establish a PSC reserve system and to permit retention of halibut in longline fisheries in GOA.

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ALASKA GROUND FISH FISHERY MANAGEMENT PLAN DISCUSSION DRAFT

TABLE OF CONTENTS

	<u>page</u>
1.0 INTRODUCTION	1
2.0 DESCRIPTION OF THE MANAGEMENT UNIT	4
1.1 Description of management areas	5
1.2 Species managed by the FMP	6
1.3 Description of stocks	15
2.0 GOALS AND OBJECTIVES	15
2.1 Goals for the FMP	16
2.2 Management objectives	18
3.0 SPECIFICATIONS	18
3.1 Definitions	20
3.2 Setting harvest levels	21
3.2.1 Variations between BSAI and GOA	21
3.2.1.1 "Other species" TACs	
3.2.1.2 MSY; complex and species management	
3.3 Optimum yield	23
3.3.1 OY of the BSAI groundfish complex	
3.3.2 OY range for GOA	24
3.4 Procedure for setting total allowable catch	25
4 Stock Assessment and Fishery Evaluation	26
4.1 Procedures for setting PSC limits	
4.1.1 BSAI	
4.1.2 GOA	27
4.1.3 PSC limits/fully utilized species	29
4.2 Reserves	30
4.2.1 BSAI	
4.2.2 GOA	
4.3 Apportionments to fishery	31
4.3.1 GOA apportionment/DAH and TALFF	
4.3.2 BSAI apportionments to fishery	32
4.3.3 Special apportionments	33
4.3.4 Reapportionments of reserve and unneeded DAP and JVP	
5.0 MANAGEMENT MEASURES	35
5.1 Domestic	37
5.1.1 Permits	
5.1.2 Catch restrictions	
5.1.3 Inseason adjustment of time and area	
5.1.4 Gear restrictions	41
5.1.4.1 BSAI	
5.1.4.2 GOA	
5.1.5 Gear allocations	
5.1.6 Fishing area restrictions	42
5.1.7 Measures for controlling PSC	
5.1.7.1 BSAI time, area, gear, and catch restrictions	42
5.1.7.2 GOA time, area, gear and catch restrictions	45

DRAFT

5.1.7.2.1	Crab protection time, area, and gear restrictions	
5.2	Management measures - Foreign fisheries	46
5.2.1	Permits	
5.2.2	Prohibited species	47
5.2.3	Time/area closures and gear restrictions	48
5.2.4	TALFF	
5.2.5	Other Gulf of Alaska regulations	
5.3	Generic Measures	48
5.3.1	Fishing seasons	
5.3.2	Recordkeeping and reporting requirements	49
5.3.3	Observer program	51
5.3.4	Habitat protection	
5.3.5	Vessel safety considerations	52
5.4	Other Measures	52
5.4.1	Limited access	
5.4.2	Size limits	53
6.0	BIOLOGICAL AND ENVIRONMENTAL CHARACTERISTICS OF THE RESOURCE	55
6.1	Distribution, life histories and stock status	
6.2	Description of habitat	67
6.3	Habitat areas of particular concern	73
6.4	Sources of data	75
7.0	DESCRIPTION OF THE FISHERY	78
7.1	History of the fishery	
7.1.1	Early history through 1950s	
7.1.2	Early foreign fisheries	79
7.2	The foreign fishing era: 1960s to Magnuson Act	81
7.2.1	Catches	82
7.2.2	Participating nations	
7.2.3	U.S. domestic fisheries	85
7.3	The Magnuson Act era	88
7.3.1	Domestic fishery development	89
7.3.2	Joint ventures	90
8.0	SOCIOECONOMIC CHARACTERISTICS OF THE DOMESTIC FISHERY	93
8.1	Domestic harvesting and processing sectors	
8.2	Products and markets	96
8.2.1	Description of product	97
8.3	Impact on domestic groundfishery development	98
8.4	Recreational fishing characteristics	99
8.5	Subsistence fishery	
8.6	Native treaty fishing rights	100
8.7	Area community characteristics	101
8.8	Organizations and laws that affect the fishery	

8.9	Potential for habitat alteration	103
9.0	HISTORY OF MANAGEMENT	113
9.1	Domestic fisheries	
9.1.1	Regulatory measures	
9.1.2	Purposes of regulatory measures	114
9.2	Foreign fisheries	115
9.2.1	Regulatory measures	
9.2.2	Purpose of regulatory measures	116
9.3	Effectiveness of regulatory measures	117
9.4	Interactions among user groups	119
9.4.1	Gear conflicts	
9.4.2	Incidental catch conflicts	
9.4.3	Conflicts between onshore and offshore processing	124

ALASKA GROUND FISH FISHERY MANAGEMENT PLAN
(combines Bering Sea/Aleutian Islands and Gulf of Alaska FMPs)

1.0 INTRODUCTION

The Alaska Groundfish Fishery Management Plan (FMP), developed by the North Pacific Fishery Management Council (Council), provides the basis for managing for the groundfish fishery (excluding halibut) of the Exclusive Economic Zone (EEZ) off Alaska. It combines and supersedes the previous fishery management plans for the groundfish of the Gulf of Alaska and the Bering Sea and Aleutian Islands.

Marginal notes point out problem areas or show where update, expert review, and augmentation are needed.

The International Pacific Halibut Commission (IPHC) is responsible for management of the North American Pacific halibut fishery. However, certain aspects of the halibut resource and the directed fishery it supports are described in this FMP because of the incidental effects groundfish fisheries have on the halibut resource and fishery. Throughout this document, the terms "groundfish" and "bottomfish" exclude Pacific halibut unless otherwise noted.

Much text about halibut was deleted, as it's in IPHC documents.

The geographical extent of the Alaska Groundfish FMP is the entire United States EEZ ~~of the North~~ of the North Pacific Ocean and the Bering Sea south of 65°26"N. latitude

Is there a better northern boundary than Cape Wales?

The groundfish resource and the fisheries of the Gulf of Alaska, Bering Sea, and Aleutian Islands groundfish fisheries are addressed as a single management unit in the FMP. Fish species managed under the FMP are limited to groundfish and squid. With few exceptions, all managed groundfish species occur in all of the regulatory areas. Target species composition of the commercial catch differs seasonally and among areas. Bathymetry and oceanography in the regulated areas are different but interrelated.

All target species occur over a broad range in the eastern Pacific Ocean and the Bering Sea. Throughout the Alaska management unit, some species are managed as single species and some as species complexes. Data exist to show that there are single stocks of a few species (e.g. halibut and perhaps sablefish). Other species common to the area are known to migrate, but lack of data prevents certainty as to whether there are discrete

stocks in certain areas. A few species are believed to have different spawning stocks in different areas.

Groundfish fisheries in the Gulf of Alaska and Bering Sea/Aleutian Islands areas required different management regimes during the early years of management under the Magnuson Fishery Conservation and Management Act (Magnuson Act). However, the fisheries have become more similar as the Council's goals for domestic fishery development have been realized. Foreign fishing dominated both areas before the 1976 200-mile EEZ were established. Foreign fisheries have since been supplanted by a fully domestic harvesting sector, first in the Gulf of Alaska and then in the Bering Sea and Aleutian Islands Areas. The domestic industry is now also able to process almost all the groundfish harvested from the EEZ off Alaska.

Research stimulated by the Magnuson Act provides evidence that, insofar as possible, interrelationships within the entire northeast Pacific ecosystem must be considered when studying and managing groundfish stocks. Integrated research and assessment provides a comprehensive model for deriving stock estimates, specifying allowable catches, and assessing conservation and management concerns such as bycatch levels.

The previous Gulf of Alaska and Bering Sea/Aleutian Islands Fishery Management Plans were amended many times, sometimes separately and sometimes with combined amendments. Each time an amendment was considered, it was necessary to examine two FMPs and two sets of regulations for applicability, and analyze effects in the context of two different sets of descriptive information; then either separate the amendment actions and analyze, submit, and implement them on parallel tracks; or combine these amendment actions, but write and publish the results in two separate sets of regulations. In the face of an already complex management regime, this situation has proved unnecessarily cumbersome, expensive, and difficult for the fishing industry, fishery managers and administrators, and the public. Annex I outlines the histories of the two separate fishery management plans.

Annex 1 shows history of amendments.

The combined Alaska Groundfish FMP updates information and eliminates duplication and anachronisms in the descriptive sections. Goals and objectives and management measures are not changed, but the text has been edited to eliminate redundancies, and reorganized to make it easier to use. The result is an FMP with accessible guidance and procedures for timely management decisions; and a single set of regulations that are easier to understand, amend, and follow.

Environmental Impact Statements (EIS), Environmental Assessments (EA), and Regulatory Impact Reviews (RIR) for the previous FMPs and amendments assessed the effects of their implementation on the human environment, including socioeconomic conditions. The reorganization and editing that was done to combine the two previous fishery management plans into one document do not alter the analyses and conclusions of previous EISs, EAs, and RIRs.

BERING SEA/ALEUTIAN ISLANDS BYCATCH MANAGEMENT

Options for the Sequel to Amendment 12a

Five organizations presented proposals or discussion papers¹ during 1989 addressing the continuation of crab and halibut bycatch controls in the Bering Sea/Aleutian Islands management areas beyond the expiration of Amendment 12a. Elements incorporated in each of these five proposals fall within four principal topics: caps, vessel incentives, time/area closures, and gear restrictions. Small workgroups of the Bering Sea Plan Team outlined elements under each topic (attached). Summaries of these outlines, with possible alternatives the Council may wish to have the Plan Team analyze, are presented below.

An example of one hypothetical program to manage crab and halibut bycatch follows:

- 1) caps in proportion to prohibited species biomass (I.C),
- 2) penalty box incentives (II.E),
- 3) modified 12a zones option 1 (III.D), and
- 4) prohibit certain types of gear from specified areas or times where and when bycatch is especially high (IV.F).

Different combinations of measures can be developed to produce other alternative programs for analysis.

¹ Organizations submitting proposals or discussion papers:

Alaska Crab Coalition, Central Bering Sea Fishermen's Association, International Pacific Halibut Commission, National Marine Fisheries Service, North Pacific Fishing Vessel Owners Association

I. PSC Limits (Caps)

- A. Provide for no caps.
- B. Specify Caps in FMP as numbers of animals or tons of bycatch.
 - Caps for individual prohibited species are specified in the FMP;
 - Apportionment of caps (as bycatch or PSC allowances) among fisheries and areas are specified in the FMP; and
 - An area/fishery is closed when its allowance is attained.
- C. Specify Caps as proportion of prohibited species numbers or biomass.
 - Caps for individual prohibited species are announced annually in the proposed and final groundfish specifications notices based on best available information on biomass and condition of prohibited species population (e.g. overall cap may be 2%, 1% or 1/2% of crab numbers when population is considered abundant, normal or depressed, respectively);
 - Apportionment of caps (as bycatch or PSC allowances) among fisheries and areas are frameworked in the FMP and are announced also in specifications notices; and
 - An area/fishery is closed when its allowance is attained.
- D. Apportion caps among individual operations (or vessels).

- Bycatch allowances are apportioned to each vessel annually based on its anticipated groundfish catch (from annual averaging of previous year's catch history) and a specified bycatch rate;
- A vessel owner/operator may lease bycatch allowance from another vessel on an annual basis after clearance with NMFS;
- All bycatch leases will expire at end of fishing year, and new individual bycatch allowances are respecified at the beginning of each fishing year; and
- A vessel is prohibited from fishing for groundfish for the remainder of a fishing year when its bycatch allowance is exhausted, but fishing may resume with acquisition (by lease and NMFS approval) of additional bycatch allowance.

II. Incentive Options

- A. Provide for no incentive programs
- B. PSC Reserve
 - Deduct from each PSC limit a specified portion to be used as a reserve;
 - Fishery/area closes when PSC limit minus reserve is attained; and
 - Continued fishing in otherwise closed fishery/area is allowed until the PSC reserve is exhausted only for those vessels that either:
 - (a) have documented a below average bycatch rate in the affected fishery/area, or
 - (b) will be conducting gear modification experiments designed to reduce bycatch rates.
- C. Bycatch Credit
 - The positive difference between the observed bycatch amount or rate and a predicted amount or rate would be established as a bycatch credit;
 - With observer coverage < 100%, fishery is closed at 90% of PSC limit based on bycatch estimation model;
 - Vessels that demonstrate bycatch rates less than predicted may resume fishing with observers until entire PSC limit is attained;
 - With observer coverage = 100%, fishery is closed when actual bycatch on vessels that have bycatch rates above predicted rate plus the predicted rate of other vessels is equal to the PSC limit; and
 - Vessels that have observed bycatch rates below the predicted rate may resume fishing until bycatch credit is exhausted.
- D. Checkpoint and Threshold Exclusion
 - A threshold bycatch rate would be established, e.g. fleet average, prior year's rate, rate from bycatch prediction model, etc.;
 - At each of several checkpoints, e.g. 25, 50, and 75% of PSC limit, vessels with bycatch rates in excess of threshold would be excluded from continued fishing (completely or within a specified area) for remainder of fishing year; and
 - Vessels exceeding threshold rate at final checkpoint (ie. 100% of PSC) would be excluded from fishery in succeeding year until after the first (or second) checkpoint was attained.
- E. Penalty Box
 - A threshold or baseline bycatch rate would be established as in Option II.D.;
 - Observed bycatch would be compared to the baseline bycatch for each weekly reporting period;

- Vessels with observed bycatch above the baseline would be excluded (sent to penalty box) for a prescribed unit of time (one or two reporting periods);
- Penalized vessels could re-enter fishery after penalty expired to fish for uncaught TAC, but could serve additional penalty time if baseline rate is again exceeded; and
- On the third (or other number) time to the penalty box within one fishing year, a vessel would be excluded for the remainder of the fishing year.

III. Time/Area Closure Options

- A. Provide for no bycatch limitation zones or other time/area closures.
- B. Leave Zones 1, 2 and 2H as currently prescribed.
- C. Area 4C Closure
 - IPHC Area 4C closed at all times to fishing with bottom trawl gear.
- D. Modified 12A Zones Option 1
 - Zone 1 as currently prescribed;
 - Area within Zone 1 closed at all times to all trawling between 160° and 163° W. long., frameworked to allow east-west movement of closed area to follow RKC population no more than 1/2° longitude per year;
 - No exception for P. cod fishing in Port Moller area;
 - Closure of Zone 1 to bottom trawling on attainment of caps (incentive program to be built in to cap structure);
 - 100% observer coverage all trawl vessels in Zone 1;
 - Zone 2 redefined as southern portion: only that part which is currently south and east of 58° N. lat. and 171°W. long.;
 - Closure of Zone 2 to bottom trawling on attainment of caps (incentive program to be built in to cap structure); and
 - Area within Zone 2 closed at all times to bottom trawling between 58° and 56°30' N. lat., and between 171° and 168° W. long. to protect blue king crabs (area approximates IPHC Regulatory Area 4C).
- E. Modified 12A Zones Option 2
 - Zone 1 as currently prescribed;
 - Area within Zone 1 closed at all times to bottom trawling, frameworked to allow east-west movement of closed area to follow RKC population;
 - P. cod fishing with bottom trawl gear in Port Moller area would be excepted from area closure;
 - Bottom trawling in Zone 1 outside of closed area would be limited by either:
 - (a) overall cap, or
 - (b) vessel exclusion from Zone 1 upon exceeding a specified bycatch rate;
 - Zone 2 redefined as southern portion: only that part which is currently south and east of 58° N. lat. and 171°W. long.;
 - Zones 1 and 2 would close to bottom trawling when separate bairdi caps are attained; and
 - Area within Zone 2 would close to bottom trawling when 50% of the Zone 2 bairdi cap was attained; area would be between 58° and 56°30' N. lat., and between 171° and 168° W. long. to delay closure of entire Zone 2 (area approximates IPHC Regulatory Area 4C).

IV. Fishing Gear Restrictions

- A. Provide for no gear restrictions.
- B. Specify minimum mesh size in trawl gear or hook size and type for longline gear.
- C. Require sorting of entire catch on deck within a specified time limit (e.g. 30 min) and immediate return of prohibited species to the sea.
- D. Apportion TAC among gear types based on each gear type's ability to catch prohibited species; gear with greatest bycatch rates would be apportioned least amount of groundfish.
- E. Require biodegradable parts of fishing that are vulnerable to being lost.
- F. Prohibit certain types of gear from fishing in specified areas or specified times of the day where bycatch are especially high.
- G. Prohibit fishing gear that does not have excluder devices designed to prevent or limit bycatch of prohibited species.

Using Caps for Bycatch Control

Advantages

- Historical and traditional method, well-understood by industry
- Once cap is established, regulation and enforcement is relatively low cost.
- Use of a set fixed cap reduces a source of variability and uncertainty for fishermen deciding to enter a fishery

Disadvantages

- Provides little or no incentive for the individual fisherman to reduce his bycatch rates
- Requires considerable amounts of information to set correctly
- Might intensify the "race for fish" by causing a shift in fishing effort towards the first part of the year
- Fairly rigid structure/Unable to address fluctuations in:
biomasses of the prohibited species and target groundfish species
market prices or marginal value of the bycatch among target and nontarget users

Info necessary/how to set them

- Need to determine appropriate overall level of removal for each prohibited species and distribution of removals among competing user groups, probably on an annual time step to adjust for fluctuations in the biomasses and the demand for bycatch
- Information needed:
 - marginal value of each species (e.g. halibut, king crab, tanner crab) to the direct fishery and as bycatch to each of the groundfish fisheries. The actual values used should be discounted for future mortality, growth and reproduction impacts of the species' harvested.
 - "true" or indifference bycatch rate for each groundfish fishery, and associated costs attached to reducing bycatch rates below this rate
 - Overall OY or TAC levels for all of the species
 - Seasonal fluctuations or other management regulations that might modify fishing patterns or values
 - Mortality rates for bycatch discarded under different fishing practices
 - Good in-season accounting of harvest (observer program)
 - Any weighting or prioritization of different users' demands
- Decision-making mechanism
 - A model could be constructed using estimates of the values of the required information and could be run over a range of plausible scenarios. Actual caps could be set using expectations of the different scenarios or worst-case scenario; modified and expanded version of Terry Smith's bycatch model
 - An "expert" panel could be set up, using members from the

crab, halibut, and groundfish industry in conjunction with federal biologists and economists to take these factors into account, through a less quantitative method, and arrive at a level and distribution that would be acceptable to the industry, the regulatory agencies, and the Council.

- The mechanism chosen should generate the solution that has the highest net value to the overall industry and that is in the feasible set with regards to political, biological, and economic constraints.

not identified as to source

**OUTLINE OF INCENTIVE PROGRAMS TO REDUCE
PACIFIC HALIBUT BYCATCH RATES IN THE
ALASKAN GROUND FISH FISHERIES**

The use of Prohibited Species Catch (PSC) limits by the North Pacific Fishery Management Council to control bycatch of Pacific halibut and other prohibited species frequently results in the closure of a fishery because PSC limits are reached before the TAC is caught. Bycatch rates are only one of several factors which determine the amount of bycatch mortality, but if rates could be reduced, a greater amount of groundfish could be harvested prior to attainment of the PSC limits. However, the current olympic-style management of the groundfish fishery does not provide fishermen the opportunity to develop methods of reducing halibut bycatch rates. Therefore, management measures that encourage fishermen to develop lower bycatch rates need to be considered. It has been proposed that an incentive program be developed which would encourage lower bycatch rates. Such a program may be constructed around one of the four approaches identified by the Plan Team for evaluation by the Plan Amendment Advisory Group (PAAG).

ALTERNATIVE 1: Monitoring With High Level of Observer Coverage

The thrust of this alternative is that fishing operations which demonstrate low bycatch rates will be allowed to continued fishing, whereas those operations with high bycatch rates will be excluded from further fishing. A checkpoint evaluation procedure would be established for fisheries with a high level of observer coverage, such as 100 percent. At each checkpoint, operations with bycatch rates above the a predetermined level, e.g. fleet average, prior year's rate, preseason assumed rate, would be excluded from further fishing. For example, the bycatch rate would be calculated from the observer data at 25, 50 and 75 percent of the PSC. Operations with a bycatch rate greater than the allowable level would be excluded from further fishing.

ALTERNATIVE 2: Incentives With Partial Observer Coverage

For fisheries with only partial observer coverage, the fishery would be closed when an estimation model predicts the PSC limit is approached, i.e. at 75 percent of the PSC limit. If observer data demonstrates that bycatch rates are less than predicted for certain operations, then those operations may continue to fish until the observed halibut "bycatch savings" are accounted for, with the stipulation that observers are carried to monitor the bycatch. For example, an operation that fished at an observed bycatch rate such that 100 mt less halibut were caught than predicted by the estimation model could fish for an additional groundfish catch up

to 100 mt of observed halibut bycatch. To prevent the PSC limit from being exceeded, it would be necessary to close the fishery when the predicted bycatch is less than the established limit, because operations with a bycatch rate greater than the predicted level would offset the "bycatch savings" accumulated by those with acceptable rates. This alternative provides the incentive both to take observers and to fish cleanly and is similar to the trawl operations plan of Eagle Fisheries, Kodiak, in 1989.

ALTERNATIVE 3: PSC Reserve Strategy

A halibut PSC reserve would be established as a subunit, e.g. 20 percent, of the overall PSC limit. Fishery observers would monitor the bycatch rates experienced by the vessels operating during the year. The halibut bycatch mortality would be calculated at specific intervals, e.g. 25 and 50 percent of the halibut PSC, and the fishery would close when the estimated halibut bycatch mortality reached a point equal to the total PSC minus the reserve amount. Operations that had demonstrated bycatch rates lower than the predicted rates would be able to continue fishing into the reserve. Options could be examined as criteria for fishing into the reserve, such as allowing only those vessels which had a specified portion of their catch or fishing time monitored by an observer.

ALTERNATIVE 4: PSC Reserve Available to Experimental Gears

Under the olympic nature of the groundfish fishery, fishermen have little opportunity to develop and test gear modifications during their fishing operations. This alternative would allow the PSC reserve concept proposed in Alternative 3 also to be available to trawl, longline, or pot vessels wishing to test experimental fishing gears that would have lower bycatch properties. Operators fishing in the PSC reserve would be restricted to NMFS-approved gear modifications and to other gear modifications as necessary, and observers would monitor the halibut bycatch.

BSA Bycatch Control Discussion Paper
Amendment 12A Sequel

Time/Area Closures
12-28-89

Reasons to close specified areas for bycatch control purposes

- Protection of biologically sensitive areas;
- Protection of spawning areas;
- Protection of species in an area that is important to certain communities or fisheries;
- Protection of known migration routes or habitat areas critical to the protected species;
- [others ?]

Bycatch control benefits of time/area closures

- Ease of enforcement: a vessel observed to be fishing in an area at a time when it is closed to fishing is in violation;
- Provides absolute protection of sensitive areas;
- Affords complete control of fishing effort for a specific area and a specific time, fishing effort is either allowed or not allowed;
- Allows management of areas based on ecosystem characteristics;
- [others?]

Disbenefits of time/area closures

- Exceptions mitigate regulatory burden but increase enforcement difficulties, eg. area closed only to trawling on the bottom would require fishermen to document the position of their net relative to the sea bottom, or bottom trawling could be presumed from observed bycatch rates of demersal species; without ability to directly prove or infer bottom trawling, enforcement of area closure to bottom trawling is impossible.
- Species protected by area closure may migrate out of the area;
- Rationale for closing one area but not a similar area may be difficult;
- Criteria for determining position of area boundaries may be considered arbitrary;
- may not be appropriate to protect species, like halibut, that are highly dispersed
- [others?]

Time/area closure options in BSA

1. Leave Zones 1, 2 and 2H as currently prescribed.
2. ACC proposal:
 - Zone 1 as currently prescribed;
 - Area within Zone 1 closed at all times to all trawling between 160° and 163° W. long., frameworked to allow east-west movement of closed area to follow RKC population no more than 1/2° longitude per year;
 - No exception for P. cod fishing in Port Moller area;
 - Closure of Zone 1 to bottom trawling on attainment of caps (incentive program to be built in to cap structure);
 - 100% observer coverage on all trawl vessels in Zone 1;
 - Zone 2 redefined as southern portion: only that part which is currently south and east of 58° N. lat. and 171° W. long.;
 - Closure of Zone 2 to bottom trawling on attainment of caps (incentive program to be built in to cap structure); and
 - Area within Zone 2 closed at all times to bottom trawling between 58° and 56°30' N. lat., and between 171° and 168° W. long. to protect blue king crabs (area approximates IPHC Regulatory Area 4C).
3. NMFS proposal:
 - Zone 1 as currently prescribed;
 - Area within Zone 1 closed at all times to bottom trawling, frameworked to allow east-west movement of closed area to follow RKC population;
 - P. cod fishing with bottom trawl gear in Port Moller area would be excepted from area closure;
 - Bottom trawling in Zone 1 outside of closed area would be limited by either:
 - (a) overall cap, or
 - (b) vessel exclusion from Zone 1 upon exceeding a specified bycatch rate;
 - Zone 2 redefined as southern portion: only that part which is currently south and east of 58° N. lat. and 171° W. long.;
 - Zones 1 and 2 would close to bottom trawling when separate bairdi caps are attained; and
 - Area within Zone 2 would close to bottom trawling when 50% of the Zone 2 bairdi cap was attained; area would be between 58° and 56°30' N. lat., and between 171° and 168° W. long. to delay closure of entire Zone 2 (area approximates IPHC Regulatory Area 4C).

J. Ginter, 12-28-89, TABYCAT.DP



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

DATE: 12-28-89

RAPIFAX

MULTIPAGE TRANSMISSION 2 PAGE(S) TO FOLLOW

ORIGINATORS NAME: J. GINTER ADDRESSEE'S NAME: H. WEEKS

MAIL ROUTING CODE: F/ARRI MAIL ROUTING CODE: NPFMC

ORIGINATOR'S TELEPHONE: _____ ADDRESSEE'S TELE.: _____

RE: BYCATCH CONTROL FOR '91; 12A SEQUEL
THIS IS THE GINTER/SALVESEN SUBMISSION
ON TIME/AREA CLOSURES. I AM FAXING
ALSO TO LOW AND TOM W.

TRANSMISSION PAGE



OUTLINE OF FISHING GEAR-RELATED BYCATCH
MANAGEMENT MEASURES FOR ALASKAN GROUND FISH FISHERIES

There are a variety of possible approaches that offer potential effective bycatch management through regulation of the fishing gear itself. Most of the successful bycatch management programs in other areas (that are gear-related) have dealt primarily with protecting only small fish, protecting only larger fish or animals (turtles), or protecting only crabs or other shellfish. Bycatch management in Alaskan waters must deal with all three categories, and often within the same fisheries. Multiple problems will undoubtedly require multiple solutions. The groundfish teams have identified six categories of gear-related bycatch measures for the PAAG to evaluate. These are as follows:

1. Minimum mesh size restrictions. The common solution to small (unmarketable) fish problems has been minimum mesh size restrictions. These have reached their highest stage of development in the North Atlantic fisheries, with a long track-record of successful management for some species. These restrictions are generally applied specifically to the cod-end of trawl gear (and cod-end liners if used). They can also be applied to pots and other types of netting. A good data base needs to be developed before implementation of any mesh-size restrictions. The starting point for Alaskan waters should be a comprehensive analysis of data

already available from other areas (such as the North Atlantic). The second step would be adequate field testing specific to the Alaskan situation. The most obvious current problem that could be addressed by minimum mesh size restrictions is the catch of small, unmarketable pollock.

2. Reduced handling time. There is a general handling time pattern throughout the overall bycatch management issue; i.e., that mortality rates will accelerate as the time frame increases between catch and subsequent release of bycatch species. Since the real consideration with any bycatch problem is actual mortality sustained (not "catch" alone), significant reductions in retention time could produce resource benefits. Regulatory requirements would fall into one of two general categories. The first approach would simply set maximum retention time standards. For example, a regulation might specify that all bycatch species must be sorted-out from the catch and returned over-the-side within 30 minutes. Fisherman would have the flexibility to modify their own operations to meet these standards. A second approach would actually address the specific gear and vessel configurations needed to achieve the potential for rapid sorting and discard of bycatch species. Examples might be a requirement for mandatory on-deck sorting potential or a ban on any cod-end transfers between vessels. In this case, fisherman would have much less individual flexibility in meeting the objective of reduced bycatch handling time. A related consideration on "handling" would be to exclude any counting of bycatch on long-line gear that falls off the hook without touching

the boat or being touched by the crew.

3. Use of "weak" gear. The basic concept involved is that gear must be used for target species that will allow larger, stronger bycatch species to escape. For example, the hooks used in a cod long-line fishery could be straightened out by large halibut. The smaller cod would not be able to escape. An actual example of current use of this concept is the Columbia River gill net fishery for shad. Net breaking strength is limited to a value that will retain shad but not the larger, stronger summer chinook salmon that are present at the same time/area and must be protected.

4. Bycatch standards for gear. The conceptual approach would be that any gear allowed in a given fishery must meet certain minimum standards related to bycatch potential. There are several possible variations. One approach would be to allocate part of a TAC to some existing fishing gear that has proven its capability of achieving a low bycatch rate. For example, part of a TAC for pollack could be allocated specifically to mid-water trawl gear. Another example would be allocating a significant part of the TAC to pot gear with halibut excluders. A related approach with the same end-point would be to eliminate any bycatch made with mid-water trawls from a PSC limitation requirement or "cap". A different variation would be to set certain bycatch standards that any fishing gear must meet in order to qualify for a certain fishery. In this case, the necessary gear configuration may not even exist when the regulation is initially formulated. A period for gear development may be required

(plus possible delayed regulation implementation). In both of the above situations, careful attention would be needed in writing the legal gear definitions.

5. Reduce TAC's until "clean" gear is developed. In a related approach to No. 4 above, the actual regulatory mechanism to control bycatch would be constraints on the target species TAC's. The lower TAC's would be maintained until "cleaner" gear became available through the development process. At this time, the TAC's would be raised and the new gear type would be required for participation in a given fishery. There would be little incentive to do this for an individual fisherman. (Note: this entire gear-related outline excludes the option of managing individual fisherman independently. This is covered in a separate section).

6. Reduce "ghost" fishing. In many fisheries, lost or abandoned gear continues to catch fish long after it leaves control of the fisherman. Both target and bycatch species may be killed in significant quantities. The most promising area for improvement lies in use of bio-degradable components in the gear itself. Thus, bio-degradable panels are currently required for sablefish pots. This use could be expanded to other groundfish pots provided that suitable gear technology is available.

Common constraints

There are a number of basic considerations that apply to most or all of

the various approaches. One is that various fishing restrictions can be used to create an incentive for gear development but absolute reductions in bycatch per unit of target catch can only be achieved when a proven gear type is actually available on the market. A second broad concern is the complexity of multi-species bycatch management. A number of documented gear development efforts showed a decrease in bycatch for one bycatch species or group at the expense of another. "Optimization" of two or more bycatch components is often a very contentious process. Of particular concern are those gear modifications which reduce the effectiveness for harvesting target species. The obvious adverse impact of increased fishing costs is now mixed with the not so obvious potential for some other bycatch increases due simply to the higher overall fishing effort needed to harvest a TAC.

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**QALUYAAT FISHERMEN'S ASSOCIATION
TESTIMONY TO THE NORTH PACIFIC FISHERY MANAGEMENT COUNCIL ON
JANUARY 18, 1990**

Thank you for this opportunity to talk to you today. My name is David Bill and I am the chairman of the Qaluyaat Fishermen's Association. Qaluyaat speaks for the commercial herring fishermen on Nelson Island. We are very worried and angry about the bycatch of herring by trawlers in the Bering Sea. This hurts our commercial and subsistence fisheries.

In 1970, proposals to open commercial herring fishery were introduced to the Alaska Board of Fisheries. The proposals at that time were turned down primarily because of past experience with the effects of previous offshore commercial harvest by foreign fisheries.

In 1984, the United Villages met and decided to open commercial herring fishery on Nelson Island knowing that commercialization was inevitable because of the pressure from state and federal governments to harvest surplus herring stocks. The regulations they requested and obtained were designed to utilize local fisherman and to protect subsistence fishery and spawning areas.

The fishermen and elders of Nelson Island met on January 11, 1990 to discuss the commercial and subsistence fishery on Nelson Island. Representatives from Toksook, Tununak, Newtok, Nightmute and Chefornak were present.

Trawlers who operate within the 200 mile US zone were the topic of the discussion. Our Association is concerned about the subsistence fishery on Nelson Island. The concerns that we feel that are important are: (if not blocked many villages will be also hurt - those that get food from the ocean).

1. The offshore fishermen are catching the herring stock that are destined to Nelson Island and Nunivak Island.
2. Trawlers who harvest herring, clams of different species are hurt - the ecology within the region as harvestable item support the sea mammals as well as the residents of Nelson Island.


We are in support of the Elders if and when they decide to close the commercial herring fishery on Nelson Island villages along the coast who utilize herring both subsistence and commercial wise will be substantially hurt by the interruptive fishermen.

We feel the 10% biomass catch supports the subsistence fishery and we feel that the stock will maintain. If the fishery on Nelson and Nunivak Island were to be closed it will be a disaster to the communities as it is the only source of income to the Nelson and Nunivak Island residents.

If the commercial herring fishery close on Nelson Island, the subsistence fishery will be hurt as this will take away the money that we use to support our subsistence life. Extended families rely on the person who is the main provider for his own family and extended families. Sometimes the number of extended families reported both subsistence and commercial use.

All that we ask is that you stop the trawlers from catching our herring and protect our commercial and subsistence fisheries. Thank you.

MEMORANDUM

TO: Council, SSC, and AP Members
FROM: Clarence G. Pautzke 
Executive Director
DATE: January 8, 1990
SUBJECT: General Groundfish

ACTION REQUIRED

Review halibut and crab bycatch management planning for 1990.

BACKGROUND

A. Gulf of Alaska

In the Gulf of Alaska, Amendment 18 established halibut mortality limits of 2000 mt for trawl gear and 750 mt for fixed gear for 1990. The Regional Director will use observed bycatch rates to account halibut mortality during 1990. However, recognizing that observer coverage may be insufficient early in 1990 to reliably calculate halibut mortality, the Council directed a work group to prepare estimates of bycatch and mortality rates for the Regional Director to use until observer data are available. Representatives of the Gulf groundfish Plan Team, NMFS, ADF&G, Council, and IPHC staff have prepared the report under item D-1(b)(1), recommending the following rates:

Halibut Bycatch Rates

Halibut Mortality Rates

<u>Bottom Trawl</u>		<u>All Trawl</u>	50.0%
Deep water flatfish	2.5%	<u>All Longline</u>	13.0%
Other bottom trawl	2.7%	<u>Pot</u>	12.0%
<u>Midwater Trawl</u>	0.01%		
<u>Longline</u>			
Sablefish	8.0%		
Pacific cod	10.0%		
<u>Pot</u>	0.4%		

NMFS has published these rates in the Gulf groundfish specifications notice in the Federal Register.

B. Bering Sea/Aleutian Islands

Bycatch in the Bering Sea and Aleutian Islands management areas will be controlled by Amendment 12a during 1990. The PSC apportionments approved in December are:

	<u>Zone 1</u>	<u>Zone 2 (1 & 2H)</u>	<u>BSAI-wide</u>
Red King crab			
DAP flatfish	138,600	--	--
DAP other	11,400	--	--
JVP flatfish	<u>50,000</u>		
Total	200,000 crabs		

C. bairdi Tanner crab

DAP flatfish	339,600	110,000	--
DAP other	260,400	1,890,000	--
JVP flatfish	<u>400,000</u>	<u>1,000,000</u>	--
Totals	1,000,000 crabs	3,000,000 crabs	

Pacific halibut

DAP flatfish	468	567
DAP other	3,273	3,966
JVP flatfish	<u>800</u>	<u>800</u>
Totals	<u>4,400</u> 4,000 mt	<u>5,333</u> mt

CP
Typo ↙

These apportionments were sent to the Secretary on December 15, 1989 and should be published soon.

Halibut Bycatch in Gulf of Alaska Groundfish Fisheries -
Interim Rates for Predicting Halibut Mortality in Early 1990

Prepared by:

Jim Balsiger
Ron Berg
Dave Carlile
Leslie Watson
Greg Williams
Bill Wilson

For

North Pacific Fishery Management Council

January 1990

Halibut Bycatch in Gulf of Alaska Groundfish Fisheries - Interim Rates for Predicting Halibut Mortality in Early 1990

At its December 1989 meeting, the Council set groundfish quotas for 1990 and reviewed halibut bycatch management measures for the 1990 groundfish fisheries. The Council recognized that the available information on halibut bycatch and mortality rates which were presented in the 1990 SAFE report may not be representative of actual rates in all components of the fishery. Therefore, the Council recommended that halibut mortality for 1990 be monitored using actual observed bycatch rates.

However, interim bycatch rates may be needed by the National Marine Fisheries Service (NMFS) until the observer program, implemented by Amendment 18 to the Gulf FMP, is able to provide such data. Therefore, the Council requested that a technical work group, comprised of members from the Gulf of Alaska Groundfish Plan Team, Council staff, IPHC, and NMFS staff develop point estimates of rates of halibut bycatch in Gulf groundfish fisheries.

In response to the Council's request, a work group reviewed available data on halibut bycatch in Gulf groundfish fisheries as presented in the 1990 SAFE report, and consulted with the Alaska Department of Fish & Game (ADF&G) to obtain information on pot fisheries. The work group then prepared an analysis during December 1989 and early January 1990.

The work group recommends the following bycatch and mortality rates for the first three months of 1990. The committee assumes that sufficient observer coverage will be in place by April 1990 to use observed halibut bycatch rates; mortality rates recommended by the committee are applicable throughout 1990 and beyond until new studies are conducted on the viability and survival of halibut released after incidental capture by various gear types.

HALIBUT BYCATCH RATES

Bottom trawl

Deep water flatfish	2.5%
---------------------	------

Available data indicate rates vary from 2.5 to 2.8% (Attachment 1). ADF&G observer data for 1987-1989 indicate the average rate for this fishery is 2.5% for the first half of the year. The work group recommends using the lower end of the range for early 1990.

Other bottom trawl 2.7%

Rates vary from 2.7 to 8.8% averaged throughout the year. New analysis of the available bottom trawl bycatch rate data, with deep water flatfish rate data removed, indicate January-June rates for all other bottom trawl fisheries average 2.7% (Attachment 2). The work group recommends this rate.

Midwater trawl 0.01%

The incidence of halibut bycatch in midwater trawl fisheries is extremely low, ranging from 0.01 to 0.06%. The ADF&G domestic observer program for 1987-1989 shows rates averaged 0.01%. The work group recommends using the most recent data for these fisheries.

Longline

Sablefish 8.0%

Rates obtained from the 1987-1989 domestic observer program range from 3.6 to 38.3%. The upper end of this range is biased by several observed fishing trips where skippers may have prospected for halibut prior to a scheduled halibut opening. Analysis of these data by ADF&G, with prospecting trips removed, suggests the rate may be in the upper end of the range (Attachment 3). However, previous analysis by the IPHC indicate 8.0% is a valid bycatch rate for this fishery (1990 SAFE report, Appendix 5). The work group recommends this rate, and notes that since the sablefish fishery will not begin until April, actual observed rates will likely be used in place of this rate.

Pacific cod 10.0%

There are few data available on halibut bycatch in cod longline fisheries. Discussions with industry indicate incidence of halibut in cod fisheries is greater than in sablefish fisheries since cod are distributed more uniformly across the shelf and slope and as a consequence cod fisheries encounter halibut with greater frequency. Available data indicate halibut bycatch averages 21.9% in cod longline fisheries; the committee does not adopt this rate because so few vessel trips are included in calculation of this estimate. A rate more similar to, but higher than, the sablefish rate was presented in the SAFE Report and the work group believes this rate is appropriate.

Pot

Pacific cod 0.4%

Very little potfishing occurs in the Gulf. Available data suggest that halibut bycatch is low. The work group suggests using the ADF&G domestic observer program bycatch rate.

HALIBUT MORTALITY RATES

Bottom and midwater trawl 50%

Available data on condition of halibut at release in domestic trawl fisheries have been compared to IPHC tagging studies of halibut survival in Canadian trawl fisheries several years ago. The Plan Team has recommended that 50% is still a valid assumed mortality rate for halibut released from shore-based trawl fisheries; no data are available from the offshore factory trawler fleet in the GOA. The work group recommends 50% for all trawl fisheries.

Longline

13%

The IPHC has analyzed available longline data on condition of halibut released during observed longline fishing trips during 1987-1989, and suggested a 13% rate for observed trips and 25% for unobserved trips. However, the work group noted that no data are available to demonstrate that unobserved trips have a higher mortality rate. Therefore, the work group suggests a single mortality rate for all longline fisheries to treat unobserved and observed vessels the same.

Pot

12%

Very few data are available on halibut condition when released from groundfish or crab pots. However, data from several Pacific cod pot fishing trips observed by ADF&G during 1987-1989 indicate that halibut condition can range from poor to excellent depending on the length of soak, the presence of crab along with halibut in the pot, and the method of removing and releasing the halibut. The ADF&G data show that 88% of the halibut released were in good condition, and 12% were in poor condition or dead.

The work group recommends that NMFS retroactively account halibut mortality using observer data from the 1990 fishery in place of these rates for the first quarter of the year only if sufficient new

observer data are gathered in the first quarter. The work group recommends that the Council's Bycatch Technical Committee advise NMFS when it is statistically valid to substitute these interim rates with 1990 observed rates.

bycatch.dec

Attachment 1

Table 1. Bycatch rate of prohibited species and species composition in domestic commercial fisheries as observed by the Alaska Department of Fish and Game during the first half of the year (1987-1989). (Prepared 11-14-89)

Catch Details	Species	1	2	
		Catch (%)	---Bycatch---	No./mt
	Prohibited			
Area: Eastside Kodiak Is	Halibut	1.7	2.4	25.4
Gear: Bottom Trawl	Tanner crab	T	T	T
Target Species: Deep Water	R.king crab	T	T	T
Flatfish Only	Salmon	T	T	0.1
Inclusive Dates:	Herring	0.0	0.0	0.0
1 Jan - 30 Jun 1987-1989	Commercial			
Vessels Observed: 6	Pacific cod	1.4		
Trips Observed: 17	Pollock	2.0		
Hauls/Sets Observed: 124	Flounder	66.3		
Total Landing: 582.9 mt	Sablefish	13.3		
Stat. Areas Observed:	Rockfish	8.1		
495730 495800 505700	Other	7.3		
505730 505800 515600				
515630 515700 515802				
525600				

1. Catch (%) refers to total catch brought on deck and is based on the observed weight of fish caught or, for longline and pot gear, the number of fish caught. Species proportions in individual trawl tows (or sets of longline/pot gear) were determined by observer's samples and expanded to the total tow weight which was visually estimated by the skipper or observer.
2. Bycatch = kg or no. per metric ton of landed fish (whole fish, all species, including landed discard) as listed on the fish ticket. Longline and pot gear kg/mt was generated from the average weight of those fish which were weighed.

T = trace, less than 0.05

0.0 = no catch.

Sum of visually estimated catch = 874.23 mt.

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Attachment 2

Table 2. Bycatch rate of prohibited species and species composition in domestic commercial fisheries as observed by the Alaska Department of Fish and Game during the first half of the year (1987-1989). (Prepared 11-14-89)

Catch Details	Species	1	2	
		Catch (%)	---Bycatch--- No./mt	Kg/mt
	Prohibited			
Area: Eastside Kodiak Is	Halibut	2.3	11.5	26.6
Gear: Bottom Trawl	Tanner crab	0.2	5.0	2.2
Target Species: All Other Targets	R.king crab	T	T	T
	Salmon	0.1	0.4	1.0
Inclusive Dates:	Herring	0.0	0.0	0.0
1 Jan - 30 Jun 1987-1989	Commercial			
Vessels Observed: 28	Pacific cod	61.2		
Trips Observed: 49	Pollock	22.8		
Hauls/Sets Observed: 298	Flounder	11.7		
Total Landing: 1690.5 mt	Sablefish	T		
Stat. Areas Observed:	Rockfish	0.3		
505730 505800 515630	Other	1.3		
515700 515730 515800				
515801 515802 525630				
525702 525730 535602				
535632 535733 535734				
535802				

1. Catch (%) refers to total catch brought on deck and is based on the observed weight of fish caught or, for longline and pot gear, the number of fish caught. Species proportions in individual trawl tows (or sets of longline/pot gear) were determined by observer's samples and expanded to the total tow weight which was visually estimated by the skipper or observer.
2. Bycatch = kg or no. per metric ton of landed fish (whole fish, all species, including landed discard) as listed on the fish ticket. Longline and pot gear kg/mt was generated from the average weight of those fish which were weighed.

T = trace, less than 0.05

0.0 = no catch.

Sum of visually estimated catch = 1982.74 mt.

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ALTERNATIVE ESTIMATES OF HALIBUT BYCATCH RATES IN THE SABLEFISH LONGLINE FISHERY, .		
BASED ON ADF&G OBSERVER DATA. D. W. Carlile 12/18/89		
CONDITIONS	No. Cruises	Halibut Bycatch Rate
All data included; unweighted	17	39.90%
Cruises w/ bycatch rates > 100 % excluded; unweighted	13	21.80%
Cruises w/ bycatch rates > 100 % excluded; weighted by no. of hauls	13	20.50%
Cruises w/ bycatch rates > 100 % and with trawls < 250 fm excluded; unweighted	8	26.90%
Cruises w/ bycatch rates > 100 % and with trawls < 250 fm excluded; weighted by no. of hauls	8	26.70%
Cruises w/ bycatch rates > 100 % excluded; weighted by fish ticket wt.	13	17.80%
Cruises w/ bycatch rates > 100 % and with trawls < 250 fm excluded; weighted by fish ticket wt.	8	26.40%
NOTE: Out of 17 cruises, only 3 resulted in individual bycatch rates less than 8 %.		

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Attachment 3

DEPARTMENT OF FISH AND GAME

P.O. BOX 3-2000
JUNEAU, ALASKA 99802-2000
PHONE: (907) 465-4110

December 18, 1989

DIVISION OF BOARDS

Mr. Don W. Collinsworth
Chairman
North Pacific Fishery Management Council
P.O. Box 3-2000
Juneau, AK 99802

COM. FISH. OFFICE
RECEIVED
DEC 18 1989

DEPARTMENT OF FISH AND GAME

Dear Mr. Collinsworth:

The Alaska Board of Fisheries has identified a serious resource problem with western Alaska herring stocks. The board is very concerned about the impact that the bycatch of herring in Bering Sea groundfish trawl fisheries is having on these herring stocks and requests that the North Pacific Fishery Management Council (NPFMC) place limits on the trawl herring by catch during its 1990 regulatory cycle.

Bering Sea herring stocks are continuing to decline, and two of western Alaska commercial sac-roe fisheries, Nelson Island and Nunivak Island, are projected to be closed in 1990. Because commercial herring fisheries provide one of the few income generating opportunities for residents of these areas, closure of these fisheries will create an economic crisis in the local communities. Subsistence herring harvests are particularly important to the residents of Nelson Island villages. Continued declines of herring stocks will result in restrictions or closures of this important subsistence fishery.

In the Togiak area, the anticipated stock decline of 43 percent will reduce stock abundance to near threshold levels in 1990, below which a commercial fishery would not be allowed. Similar declines are occurring in other western Alaska herring stocks. During the November meeting, the Board of Fisheries removed provisions which would allow increase in the potential harvest in the Dutch Harbor food and bait fishery if the Togiak sac-roe fisheries harvest is below the allowable exploitation rate. The Board of Fisheries also delayed the opening of the fishery to further reduce its impact on Northern Bering Sea herring stocks. As required by State law and Federal law (ANILCA), which mandates subsistence as priority use, the board further directed the Department of Fish and Game to close the Dutch Harbor bait fishery if herring subsistence harvests are being impacted anywhere in western Alaska.

Board of Fisheries harvest policies allow a maximum exploitation rate of 20 percent on herring stocks. We have directed the Department of Fish and Game to take interception fisheries into account when establishing harvests for directed herring fisheries

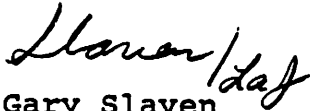
December 18, 1989

such that the total exploitation does not exceed 20 percent. This policy is clearly documented in the Board of Fisheries' management plan for Prince William Sound, Kamishak Bay, and Bristol Bay herring stocks.

Preliminary data prepared by the Alaska Department of Fish and Game demonstrate that the bycatch of herring by groundfish trawlers in the Bering Sea amounts to an exploitation rate of at least 5 percent. The board believes the bycatch data on which this figure is based account for only a small proportion of the actual herring bycatch. It is very important that the Council address the herring bycatch issue during the 1990 Council regulatory cycle. The Board of Fisheries has formed a committee to address the herring bycatch problem and would like to present testimony to the Council's PAAG committee in early January. Because plan amendments enacted during the 1990 regulatory cycle would not take effect until January 1991, the board further request's the Council to take emergency action next spring to implement the plan amendment's herring bycatch controls to cover the critical period between July and December 1990 when herring will be migrating through areas fished by the groundfish trawl fleet.

The board will be considering a proposal to close waters of the territorial sea to trawling, in the Bering Sea, during its January meeting as a means of protecting salmon and herring resources. Barring any action by the Council to address the bycatch of herring, the board may consider taking action in the territorial waters to compensate for the bycatch in the Bering Sea.

Sincerely,



Gary Slaven
Chairman
Board of Fisheries

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

DIVISION OF SUBSISTENCE

AGENDA D-1(a)
SUPPLEMENTAL
STEVE COWPER, GOVERNOR

BOX 3-2000
JUNEAU, ALASKA 99802
PHONE: (907) 465-4147

December 5, 1990

JAN 12

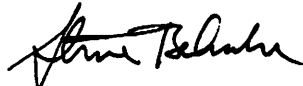
Mr. Clarence Pautzke
Executive Director
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, Alaska 99510

Dear Mr. Pautzke:

Several herring stocks in the eastern Bering Sea have declined to levels below which no commercial fishing will likely be allowed in 1990. If these stock declines continue, subsistence utilization of these herring stocks may also be threatened. Subsistence utilization of herring is particularly important to the local communities of Nelson Island. A report documenting the subsistence utilization of herring in the Nelson and Nunivak Island areas is enclosed for your information.

The bycatch exploitation rate of herring in Bering Sea groundfish trawl fisheries appears to be increasing, even as herring stocks are declining. If Bering Sea herring stocks decline to a level which does not allow enough harvest to provide for subsistence uses, other fisheries which take substantial amounts of herring would have to be closed to provide the subsistence preference required by state and federal law. For this reason it is very important that the issue of herring prohibited species catch measures be dealt with during the 1990 Bering Sea/Aleutians groundfish plan amendment cycle.

Sincerely,



Steve Behnke
Director

Enclosure

cc: Don Collinsworth
Steve Penoyer, NMFS/AKR
Sen. John Binkley
Ken Parker

**SUBSISTENCE HERRING FISHING IN THE EASTERN BERING SEA REGION:
NELSON ISLAND, NUNIVAK ISLAND, AND KUSKOKWIM BAY**

by

Mary C. Pete

**Alaska Department of Fish and Game
Division of Subsistence
Fairbanks, Alaska**

December 1989

ABSTRACT

This report summarizes information on the subsistence use of herring in the Nelson Island and Etolin Strait region of Alaska. Data were gathered in annual surveys from 1986 through 1988. A complete census of fishing families were surveyed each season to arrive at total harvests. Qualitative information on community experiences with depletions of herring stocks in the late 1960s and early 1970s is included. A brief description of subsistence herring use by five other communities in the Nunivak Island and Kuskokwim Bay areas supplements the more detailed information presented for Nelson Island communities.

Herring is a central component of the subsistence economy of the communities in the Nelson Island area. It comprises the highest proportion of all species harvested of the total subsistence outputs -- 40 percent by weight in Tununak in 1986. Participation, both by individuals and households, in subsistence herring production is high.

Subsistence harvest estimates for Nelson Island communities in recent years (1986 through 1988) have shown substantially higher annual harvests than those recorded in previous years. The recent estimates indicate that herring harvest effort and use was considerable. Over 200 short tons of herring was harvested annually for subsistence use by communities in the Nelson and Nunivak Island districts and the Kuskokwim Bay area combined. This is considerably greater than earlier estimates from the late 1970s which projected that the combined communities in the eastern Bering Sea region took an approximate annual total of 110 short tons of herring for subsistence use. Smaller sample sizes and reduced numbers of fish probably account for much of the difference.

Declines in herring stocks within the past two decades have been attributed to offshore foreign fishing in the 1960s and 1970s. Depletion of herring returning to the Nelson Island area has created hardship for the area residents. They have had to make adjustments. Current projected declines understandably cause concern.

TABLE OF CONTENTS

ABSTRACT	
LIST OF FIGURES	iii
LIST OF TABLES.....	iv
INTRODUCTION	1
METHODOLOGY.....	2
COMMUNITIES USING HERRING FOR SUBSISTENCE USE	3
Nelson Island District.....	3
Nunivak Island and Kuskokwim Bay.....	7
SUBSISTENCE HERRING FISHING	8
Nelson Island District.....	8
Harvest Levels	10
Nunivak Island and Kuskokwim Bay.....	13
Harvest Levels	13
Total Subsistence Herring Harvests	14
Effects of Reduced Herring Stocks on Subsistence Fishing, <i>ca.</i> 1960-80	17
SUMMARY	18
REFERENCES.....	20
APPENDIX 1. SURVEY METHODOLOGY.....	22
APPENDIX 2. SUBSISTENCE HERRING FISHERY SURVEY.....	25

LIST OF FIGURES

Figure 1. Location of communities in the Nelson Island, Nunivak Island, and Kuskokwim Bay areas.	4
Figure 2. Areas used by Nelson Island residents for subsistence herring fishing and roe-on-kelp, beach grass, and <i>kelugkaq</i> collecting in 1987.....	9
Figure 3. Pounds of herring harvested per capita by Nelson Island communities, 1986-88.....	12

LIST OF TABLES

Table 1.	Nelson Island Population and Participation in Subsistence Herring Production, 1988.....	6
Table 2.	Population for Nunivak Island and Kuskokwim Bay Area Communities, 1986 and 1980	7
Table 3.	Estimated Nelson Island Subsistence Herring Harvest Levels (in short tons) and Household Participation, 1986-88	11
Table 4.	Estimated Nunivak Island and Kuskokwim Bay Communities Subsistence Herring Harvest Levels (in short tons), 1976-87.....	14
Table 5.	Total Subsistence Herring Harvests (in short tons), Nelson Island and Nunivak Island Districts and Kuskokwim Bay	16

INTRODUCTION

This report primarily summarizes information from a three-year research project, conducted from 1986 through 1988, in the Nelson Island area communities. The multi-year study was conducted to document the level of subsistence use of herring by the residents of these communities, to monitor the effects of the commercial herring sac-roe fishery initiated in 1985, and to develop a cost-effective means of annually estimating the subsistence herring harvest. Findings from this project were described in two reports -- one completed in 1986 (Pete and Kreher 1986) and another in 1987 (Pete, Albrecht, and Kreher 1987). The present report also briefly describes effects to subsistence use of declines in herring numbers in the late 1960s and early 1970s. Finally, the scant information on subsistence herring utilization by other communities in the Nunivak Island and Kuskokwim Bay area is summarized.

The importance of the subsistence use of herring to residents of Nelson Island and vicinity has been reported in many sources (Lantis 1946; Barton 1978; Hemming, Harrison, and Braund 1978; Lenz 1980; Skrade 1980; Fienup-Riordan; Pete 1984; Pete and Kreher 1986; Pete *et al.* 1987), including the North Pacific Fishery Management Council's Bering-Chukchi Sea Herring Fishery Management Plan (1981). Between the early 1970s and 1984, proposals to open Nelson Island herring stocks to commercial fishing were met with intense opposition by Nelson Island area residents, primarily because of their experience with effects of previous offshore commercial harvests by foreign fisheries (Hemming *et al.* 1978; Pete 1984).

In 1984, with an understanding that commercialization was inevitable given state and federal mandates to authorize use of harvestable surpluses of fish, the people of the Nelson Island area submitted proposals to open the Nelson Island herring stocks to commercial harvest. The regulations they requested and obtained for the commercial herring fishery were designed to favor participation by local fishermen and to protect the important subsistence fishery. Equipment was small-scale, like that used in the subsistence fishery, and area closures to commercial fishing were established to protect subsistence fishing and herring spawning sites. Local residents requested documentation of their

subsistence use of herring in order that minimal disruption occur due to commercial activity, hence this three-year research project was developed.

The research substantiated the importance of herring in the subsistence economy of Nelson Island area residents. The scope and timing of surveys for this project was notable for several reasons. A complete census of fishing families in all communities was surveyed during the subsistence fishing season each year. At the time of the studies herring stocks were plentiful, thus effort and participation in the subsistence fishery was reported to be similar to earlier years (those prior to the mid-1960s) when herring were typically abundant. Harvest surveys that were conducted previously, during the late 1970s and early 1980s, were limited by an inability to contact many fishermen, and those surveys also took place during years that stock abundance was considered to be improving from low levels.

Projected returns of herring for the 1990 season are below the thresholds at which commercial harvests are allowed to occur in Nelson Island and Nunivak Island districts (Hamner 1989). Nelson Island residents have expressed concern about loss of opportunity and reduced productivity of subsistence herring fishing in the near future. Furthermore, the commercial herring fishery became an important option for generating income as well as providing a significant, if fluctuating, financial contribution to the local economy (Pete 1985).

METHODOLOGY

A detailed description of the methods of data collection can be found in Appendix 1. Briefly, information on harvest times, personnel involved, gear used, areas fished, and harvest levels were recorded using a survey questionnaire administered in person (Appendix 2). In all years of the project, a census (100 percent) sample of fishing families was surveyed to arrive at total community harvests of herring for subsistence use.

Information on results of declines in the late 1960s and early 1970s in Nelson Island herring stocks was derived predominantly from interviews with members of approximately 50 percent of Tununak fishing families during the 1986 survey and between one to five elders in each of the other

three communities. Furthermore, Tununak was the subject of a comprehensive subsistence harvest study and elderly residents were systematically asked about herring production during the time of declining stocks. The survey team specifically asked knowledgeable elders in the other communities about what happened when herring were not plentiful. The topic was discussed informally with many other individuals at other occasions subsequent to the 1986 survey season. Although the information was qualitative compared to in-season harvest data, it was highly consistent among individuals and communities.

COMMUNITIES USING HERRING FOR SUBSISTENCE USE

Nelson Island District

There were four communities that utilized Nelson Island district herring stocks for subsistence use that participated in the three-year project. From north to south, these communities were Newtok, Tununak, Toksook Bay, and Nightmute (Fig. 1). These communities and Chefornak, approximately 20 miles south of Nelson Island, constituted a discrete regional and societal group, called *Qaluyaarmiut* (Fienup-Riordan 1983; Shinkwin and Pete 1984). They traditionally were united by a network of kinship ties, formed a marriage universe, and cooperated in important social, religious, and political ceremonies. This intercommunity relationship has persisted to current times; the communities still were intertwined through kinship and in the late 1970s, they formed a regional political organization through which they interact with outside agencies.

Newtok, the only community not situated on Nelson Island proper, is along the Keyalivik River, just north of the island (Fig. 1). Tununak, Toksook Bay, and Nightmute are all on Nelson Island. Newtok and Nightmute are riverine communities; their residents relocated to coastal camps to produce herring and other subsistence foods. Newtok residents used to go to Niliklugak until the late 1970s, when cumulative erosion and deposition made their settlement there unsuitable. They camped at Tununak to fish for herring until the early 1980s. With faster outboard motors and longer nets, they

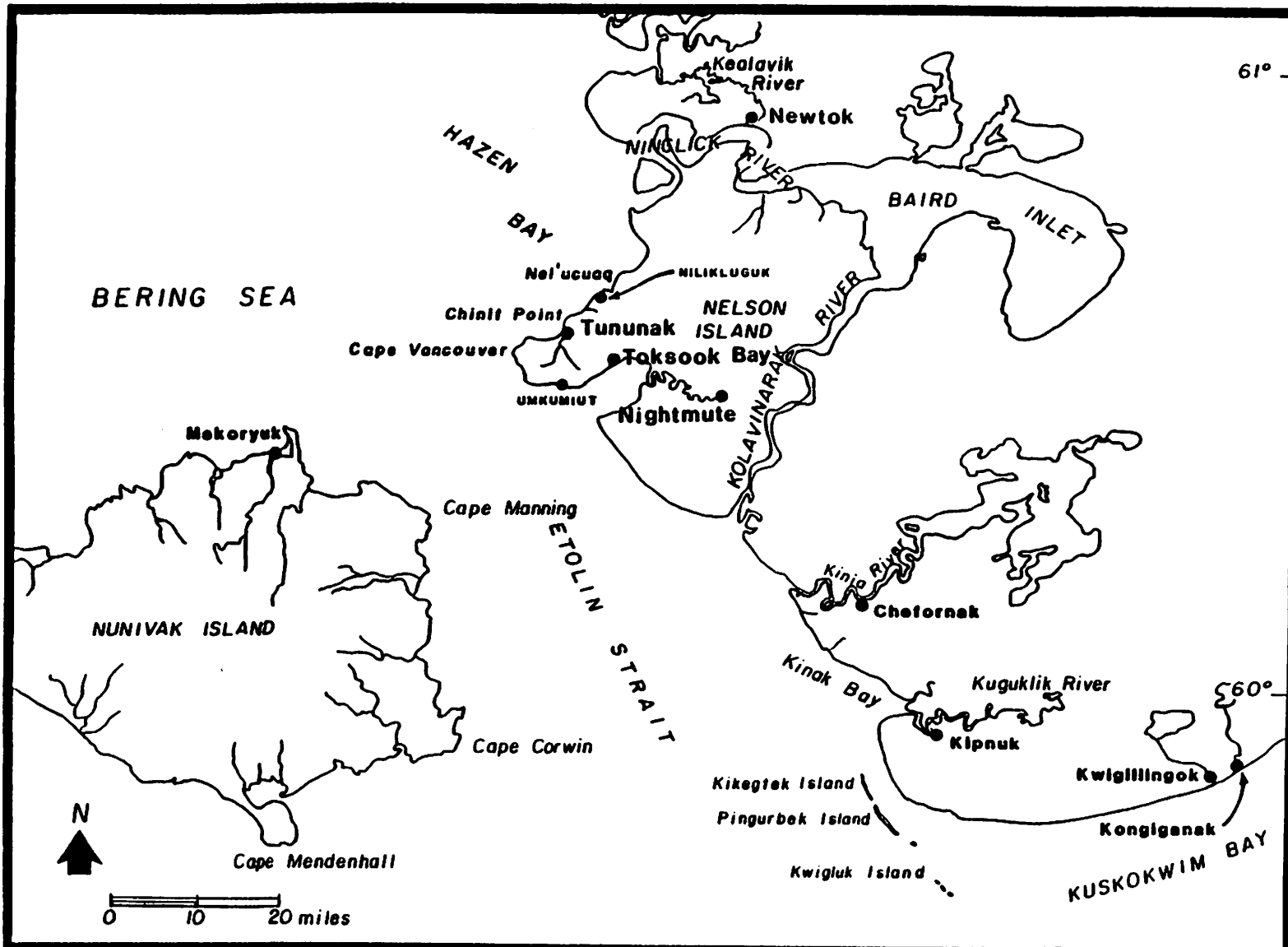


Fig. 1. Location of communities in the Nelson Island, Nunivak Island, and Kuskokwim Bay area.

often harvested their herring in one tide and returned to the village to process their catch. Umkumiut, a sizable seasonal camp is still used by residents of Nightmute and Toksook Bay. Families used to move to Umkumiut prior to ice breakup for spring seal hunting and stay until August for marine fishing and drying. Throughout the study period, its occupation by families was generally limited to the herring season, although hunters used the camp throughout the year.

The present locations of Tununak and Toksook Bay have been noted as influential in their current levels of herring use. Located along the coast near herring spawning areas, they were most advantageously situated to harvest and process herring. Furthermore, their locations made trips to traditional winter harvesting areas prohibitive because of costs in fuel, time, and equipment, thereby contributing to an increased dependence on herring (Hemming *et al.* 1978).

Prehistoric evidence and historical records (Okada, Okada, Yajima, Miyaoka, and Oka 1982; Fienup-Riordan 1983) demonstrate that Tununak was a spring and summer camp for harvesting sea mammals, herring, salmon, and other marine resources. In winter, Tununak residents moved eastward on Nelson Island, nearer to Chakchak, or to small, extended-family based settlements along northern Nelson Island or east of Newtok. From these settlements, they harvested pike, burbot, whitefish, blackfish, and other resources throughout the winter. The establishment of Tununak as a permanent settlement occurred to facilitate use of the school, church, and stores.

Toksook Bay, previously another customarily used summer camp, was established as a permanent settlement in 1964 when some of the residents of Nightmute whose homes had been threatened by erosion settled there, because there was little area for expansion in Nightmute (Hemming *et al.* 1978; Fienup-Riordan 1983). Winter resource use areas of Toksook Bay residents were still focused in the vicinity of Nightmute and areas south and east of Nelson Island.

Community populations and numbers of households remained relatively stable over the three study years, 1986 through 1988, with only a three percent increase in the regional population. According to our censuses, in June 1988, the four villages had a combined, permanent-resident population of 1,110 persons in 207 households (Table 1), an overall average household size of 5.4 persons, with a range of 1 to 11 persons per household. More than one-half (58 percent) of the

households ranged in size of 5 to 11 persons. Toksook Bay, the largest village in terms of population, also had the largest average household size. Close to 99 percent of the permanent residents were Alaska Native, primarily Yup'ik Eskimo, and most, including children, spoke Central Yup'ik as their first language. Many elders did not understand English.

TABLE 1. NELSON ISLAND POPULATION AND PARTICIPATION IN SUBSISTENCE HERRING PRODUCTION, 1988

Community	Population	Total number of households	Number of participating households	Number of fishing families
Newtok	207	40	27 (68%)	16
Tununak	318	63	54 (86%)	37
Toksook Bay	422	77	65 (84%)	37
Nightmute	163	27	20 (74%)	14
Totals	1,110	207	166 (80%)	104

The local economy of these communities is characterized as "a mixed, subsistence-based economy" referring to their use of local, wild resources obtained by hunting, trapping, fishing, and gathering, with some income secured by primarily seasonal, though intermittent, wage employment, commercial sale of halibut, salmon, herring, and furs, and cottage industries (Wolfe and Walker 1987). None of these communities were linked by road. Air and water transportation were the primary means of access. Cost of living was typically high because of the expense of importing goods and services. In economies such as these, the subsistence sector is generally the most stable, therefore, the most reliable. Adjustments are made in subsistence production based on fluctuations in abundance,

availability of resources, and personal circumstances. However, drastic and unexpected reductions in abundance of critical species, such as herring in the Nelson Island area, have caused difficulties.

Nunivak Island and Kuskokwim Bay

Other communities situated on Nunivak Island and along Kuskokwim Bay use herring for subsistence purposes. These include Mekoryuk, located on the north shore of Nunivak Island, and Chefornak, Kipnuk, Kwigillingok, and Kongiganak along Etolin Strait and Kuskokwim Bay (Fig. 1). Population and household data are presented in Table 2. Community size ranged between 180 and 500 persons, most of whom were Yup'ik Eskimo.

TABLE 2. POPULATION FOR NUNIVAK ISLAND AND KUSKOKWIM BAY AREA COMMUNITIES, 1986 and 1980

Community	1986 ^a Population	1980 ^b		
		Population	Number of households	Percentage Alaska Native
Mekoryuk	173	160	44	95.6
Chefornak	310	230	38	96.1
Kipnuk	498 ^c	371	81	96.5
Kwigillingok	257	205 ^d	35 ^d	96.9
Kongiganak	295	239	48	96.7
Totals	1,533	1205	246	-

^a Alaska Department of Labor 1989.

^b U.S. Department of Commerce 1980.

^c This is 1987 data (Pete *et al.* 1987).

^d This is 1981 data (Stickney 1984).

Kipnuk participated in subsistence herring harvest surveys in 1985 and 1987. Surveys in both years were administered to 100 percent of the subsistence herring fishing families (Pete *et al.* 1987). Information on subsistence herring use by the other four communities was based on existing literature and reports (Hemming *et al.* 1978; Stickney 1984; Pete 1984; Anderson 1985; Bue 1986; Alaska Department of Fish and Game 1987).

SUBSISTENCE HERRING FISHING

Nelson Island District

Previous reports (Pete and Kreher 1986; Pete *et al.* 1987) include detailed descriptions of harvest times, gear used, fishing areas, personnel involved, and methods of processing and storing of herring. Most aspects of the fishery remained very similar throughout the three years of the project. The following is a brief summary of information in the two earlier reports.

Kin-based subsistence herring production units, or fishing families, organized the complex of activities necessary to harvest, process, and store herring for the winter. Most fishing was done by men and most processing was done by women. Fishing families were often composed of members from more than one household. Commonly, adult children cooperated with their parents who lived in separate households to produce herring for subsistence use. Participation in subsistence herring production by households throughout the three years was typically high. There was an annual average involvement by 80 percent of all households which included over 40 percent of the regional population and approximately 85 percent of the people between the ages of 15 to 70 years. Persons as young as six years of age were involved in some aspect of subsistence herring production.

Each community used traditional fishing areas which were located in proximity to the settlements (Fig. 2). Set gill nets with mesh sizes of 2 to 2-3/4 inches were the most common gear. Nets were typically between 60 and 150 feet long with some as long as 300 feet in length. Locally made,

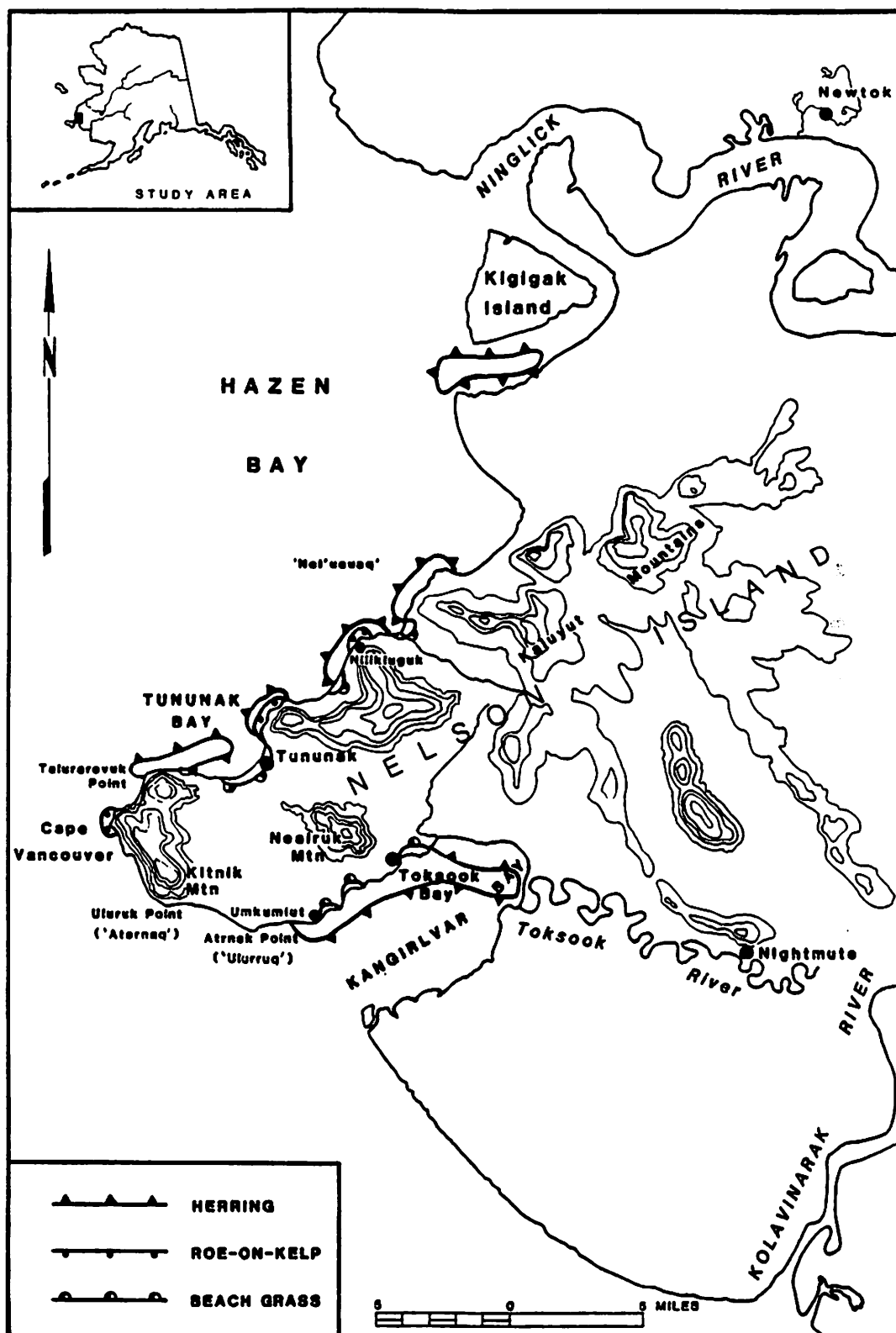


Fig. 2. Areas used by Nelson Island residents for subsistence herring fishing and roe-on-kelp, beach grass, and *kelugkaq* collecting in 1987.

wooden, and industrially manufactured, aluminum boats between 14 to 28 feet long were used for subsistence herring fishing. Most boats were between 18 and 22 feet in length.

Herring season from fishing, through aging, cleaning, drying, and storing of the herring began as soon as the adjacent ocean became ice free, generally in late May, and lasted for about two months. It was a very busy time of year with many other subsistence activities occurring around those involving subsistence herring production. Herring roe-on-kelp (*elquat*) was also collected. Other fish species sought throughout this time included halibut, Pacific cod, wolf fish, five species of salmon, capelin, smelt, and many species of shellfish and marine invertebrates. June through August was the most common time to get seasonal wage employment, often outside of the communities. Most subsistence fishing occurred after the local commercial herring season was over, except for Tununak; they fished as soon as herring occurred in the area. The other communities preferred the smaller sized, "less-fatty" herring. In spring and fall (June and September), beach grass, called *tapernat* was gathered to use in braiding herring into strings (*ullipengayit*) to dry. Throughout the season, assuring adequate numbers of herring on the drying racks was always a priority task.

Harvest Levels

Throughout the three years of the surveys, subsistence herring harvest levels for the four Nelson Island communities ranged from 124 to 166.8 short tons (Table 3). The numbers of fishing families involved in producing herring for subsistence use has remained relatively constant -- over two-thirds of all households have fished in most years (Tables 1 and 3). Average multi-household harvests ranged from three-quarters of a ton to two tons, depending on the community and year (Pete and Kreher 1986; Pete *et al.* 1987). The harvest levels and degree of involvement described by this study were significant. Prior to these findings, most managers and policy makers involved with herring fisheries assumed that all communities along the eastern Bering Sea coast, from Pilot Point in Ugashik Bay to Golovin in Norton Sound, only utilized up to 110 short tons of herring for subsistence. The four Nelson Island area communities exceeded that estimate themselves.

TABLE 3. ESTIMATED NELSON ISLAND SUBSISTENCE HERRING HARVEST LEVELS
(IN SHORT TONS) AND HOUSEHOLD PARTICIPATION, 1986-88

Community	1986		1987		1988	
	Short tons	Number of participating households	Short tons	Number of participating households	Short tons	Number of participating households
Newtok	12.6	18	10.0	22	12.5	27
Tununak	63.6	56	48.0	56	49.3	54
Toksook Bay	69.5	64	54.0	63	48.5	65
Nightmute	21.4	18	15.0	19	16.0	20
Totals	166.8	156	124.0	160	136.3	166

By all criteria, herring are a crucial part of the economy of Nelson Island area residents. Total subsistence harvests demonstrate its importance in the subsistence sector. Based on a household harvest and income survey of 52 percent of all Tununak households in 1986, the per capita subsistence production was 1,091 pounds, placing it within the top 10 percent of communities statewide (Wolfe and Walker 1987). As many as 90 species of fish, shellfish, marine invertebrates, marine mammals, large and small game, birds, berries, and plants were listed as commonly harvested by Tununak residents. Still, herring accounted for 40 percent by weight of the subsistence output in Tununak that year. Per capita pounds of herring harvested in all four communities from 1980 through 1988 was considerable (Fig. 3).

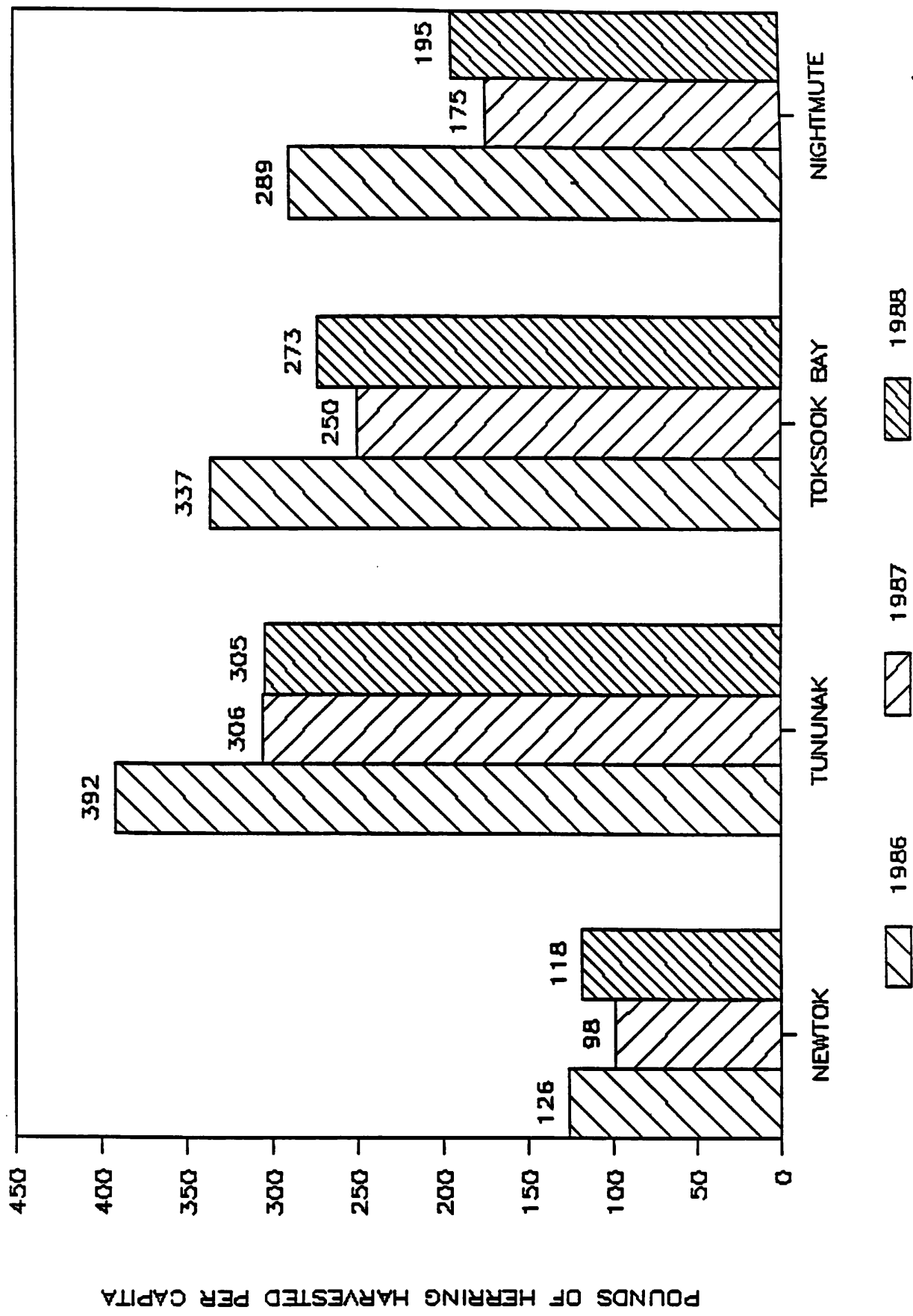


Fig. 3. Pounds of herring harvested per capita by Nelson Island communities, 1986-88.

Nunivak Island and Kuskokwim Bay

Gear used for subsistence herring fishing by Kipnuk fishermen was similar to that used by Nelson Island fishermen (Pete and Kreher 1986). In Kipnuk, outboard powered boats ranged in length from 12 to 24 feet. Locally constructed, wooden, and aluminum skiffs were utilized. Drift or set gill nets ranged from 12 to 450 feet in length with stretched mesh sizes from 1 to 2-3/4 inches (Anderson 1985; Pete *et al.* 1987).

Herring caught for subsistence use were processed in a manner similar to that described for Nelson Island. They were gutted, cleaned, and braided into strings to dry for winter food. It is likely that harvesting and processing of herring was similar in the other communities, although no recent studies have been conducted.

Most subsistence herring fishing areas of each community were in nearby waters, with the exception of Mekoryuk where people fished along the entire eastern coast of Nunivak Island (Fig. 1; Pete 1984) or within the Nunivak Island fishing district. The communities from Chefnak, south and east to Kongiganak, fished in the Cape Avinoff district. A few people from Chefnak joined relatives in Toksook Bay and at Umkumiut, to fish for, and process herring for subsistence in 1986 through 1988 (Pete and Kreher 1986; Pete *et al.* 1987). In contrast to past years, Kongiganak residents fished near their community in 1985, rather than in the area used by Kwigillingok (Anderson 1985). There are no data on Kongiganak or Chefnak herring fishing areas for 1986 and 1987.

Harvest Levels

Herring harvest data from Nunivak Island and Kuskokwim Bay communities have been collected, intermittently, between 1976 and 1987 by various entities using differing methodologies (Alaska Department of Fish and Game 1986; Hemming *et al.* 1978; Pete *et al.* 1987; Stickney 1982). Table 4 shows subsistence herring harvest data from these reports. Only for 1985 were harvest data

collected from all five communities. In 1985 the total estimated harvest was 31.1 short tons. The 1985 harvest was the largest recorded for each community except Kwigillingok.

TABLE 4. ESTIMATED NUNIVAK ISLAND AND KUSKOKWIM BAY COMMUNITIES
SUBSISTENCE HERRING HARVEST LEVELS (IN SHORT TONS), 1976-87^a

Community	'76	'77	'78 ^b	'79	'80	'81 ^c	'82	'83 ^c	'84 ^c	'85	'86	'87 ^d
Mekoryuk		.6 ^b	.6				.3 ^e			.7	.2	
Chefornak			3.1							13.0		14.0
Kipnuk			6.1							9.4 ^f		14.4 ^f
Kwigillingok	11	1.0		7.9	13.2		13.2			4.6		
Kongiganak		.3								3.4	2.0	

Harvest Totals (short tons)	11	1.9	9.8	7.9	13.2		13.5			31.1	2.2	28.4

Communities Represented	1	3	3	1	1	0	2	0	0	5	2	2

^aUnless otherwise noted, harvest levels up to 1986 are from Alaska Department of Fish and Game 1987.

^bHemming *et al.* 1978.

^cNo surveys conducted; blank spaces reflect lack of data rather than no harvest for individual communities throughout this period.

^dK. Schultz, pers. comm. 1987.

^eStickney 1982.

^fPete *et al.* 1987.

Total Subsistence Herring Harvests

Subsistence herring harvest information from 1977 to 1988 from all nine communities discussed in this report is compiled in Table 5. The figures do not reflect complete harvests for all fishing families for Mekoryuk or Kuskokwim Bay communities. However, the total upper-range

harvest estimate for all these communities was 212.5 short tons. This is twice the previously assumed typical subsistence harvest for all communities along the eastern Bering Sea coast (Hemming *et al.* 1978). Furthermore, the harvest estimates for the years depicted in Table 5 were reported by local residents to approach normal subsistence production from healthy herring stocks. Not until 1984 were herring returns considered "recovered" by elderly residents of the Nelson Island region. Herring were considered "good-sized" and abundant in areas traditionally fished with customary gear, and necessary harvest levels were attainable in reasonable timespans. Thus, harvest estimates for years prior to the late 1970s portrayed less productive times, and possibly, reduced effort.

On an average, Nelson Island communities accounted for approximately 70 percent of the total subsistence herring harvests for the nine communities. Kuskokwim Bay communities have harvested the remaining 30 percent of the total harvest. Mekoryuk harvests were the lowest, averaging one-half ton (Table 5). However, information on Mekoryuk subsistence herring harvests was the most incomplete of all communities, because fishing families that camp on the south side of the island have never been contacted. Although, historical sources report less dependence on herring than the Nelson Island communities (Lantis 1946), no complete or current data exist to confirm the level of use for Mekoryuk or Nunivak Island.

Effects of Reduced Herring Stocks on Subsistence Fishing, ca. 1960-80

Beginning in the early 1960s, changes in the herring runs returning to Nelson Island were observed. Numbers fluctuated from year to year, herring sizes decreased, and productivity changed in fishing areas. During this time, Nelson Island residents reported finding more glass floats and pieces of monofilament herring gill net webbing on the beach around Nelson Island. In 1968 and 1969, local residents saw large, foreign fishing boats north of Nunivak Island, and in Etolin Strait, while seal hunting in spring (early May). In 1973, one person found an extremely long section of webbing, over several thousand feet long. Locally made nets, ranging from 20 to 60 feet in length, with multifilament cotton or nylon twine, were the predominant gear for subsistence herring fishing.

TABLE 5. TOTAL SUBSISTENCE HERRING HARVESTS (IN SHORT TONS), NELSON ISLAND AND NUNIVAK ISLAND DISTRICTS AND KUSKOKWIM BAY

Community	Average harvest	Range of harvest	Years with data
<u>Nelson Island District</u>			
Newtok	11.6	10.0 - 12.6	86, 87, 88
Tununak	53.2	48 - 63.3	86, 87, 88
Toksook Bay	59.3	51 - 69.5	86, 87, 88
Nightmute	17.4	15 - 21.4	86, 87, 88
Subtotals	141.6	124 - 166.8	
<u>Nunivak Island and Kuskokwim Bay</u>			
Mekoryuk*	0.5	0.2 - 0.7	77, 78, 82, 85, 86
Chefornak*	10.0	3.1 - 14.0	78, 85, 87
Kwigillingok*	8.5	1.0 - 13.2	76, 77, 79, 80, 82, 85
Kongiganak*	1.9	0.3 - 3.4	77, 85, 86
Kipnuk	10.2	6.7 - 14.4	78, 85, 87
Subtotals	9.1	? - 45.7	
Totals	150.7	? - 212.5	

*Data represent minimal harvest estimates; not all fishing households were contacted.

From the late 1960s through the mid-1970s, subsistence herring fishing was generally unpredictable and often not productive for many fishermen. Herring were small; they passed through set gill nets previously used. Fishermen began using smelt and capelin dipnets or pieced together webbing with mesh sizes of 1 to 1-1/2 inch. They often drifted for herring with these short nets. Nets were set for weeks rather than days. A few fishermen salvaged and hung the monofilament webbing they found on beaches. Although herring were more likely to get caught in those nets, because of the smaller mesh size, the nylon dug into the flesh of the herring, complicating processing and sometimes making them unusable for food.

Consistently productive fishing areas, such as waters off Chinit Point and Cape Vancouver became erratic, and were heavily fished by residents of all communities when herring occurred in appreciable numbers. Because roe was sparse, local residents felt that whatever spawn was deposited should be allowed to produce herring, and roe-on-kelp collecting ceased. Subsistence herring harvests declined; several families noted for catching up to two tons of herring estimated that they got no more than 100 to 200 pounds -- "a pilot cracker box full."

Because of the unpredictable nature of herring fishing and unreliability of success, many families ceased subsistence herring fishing and concentrated on other species. This was especially true for the residents of Newtok and Nightmute. These two communities, located near productive fresh water fishing areas, reportedly increased production of pike, whitefish, burbot, and blackfish for food to sustain them through the winter. Tununak and Toksook Bay residents also targeted other species as well. Halibut, sculpin, "needlefish" (stickleback), flounder, saffron cod, Dolly varden, all species of salmon, smelt, and capelin harvests increased. Late-summer and fall berry picking trips made by residents of all four communities to the east side of Nelson Island and the adjacent mainland were prolonged in order to set nets for pike, whitefish, and burbot. These substitutes increased gasoline and time expenditures during both harvesting and processing.

By 1972, local residents began appealing for help from agencies and organizations, such as Nunam Kitlutsisti in Bethel. A few elders remember emergency food drops (government cheese, macaroni, dried milk). Either the State of Alaska emergency services or Alaska Air National Guard

were credited with the food drops. However, a few younger people have attributed the food drops to other circumstances which may have coincided with the reduced number of herring.

It is not difficult to understand the local view that offshore foreign fishing in the 1960s and 1970s was directly responsible for herring depletions in the Nelson Island area. After their experience, area residents became vocal about their opposition to any commercialization (Hemming *et al.* 1978) and have played an active role in the regulatory process pertaining to all herring fishing affecting subsistence uses.

SUMMARY

The subsistence herring fishery in Nelson Island was a significant aspect of the economy of the communities in the area, demonstrated by total harvests, per capita and family harvests, and with available data, by the proportionate contribution of herring to total wild resource outputs. The proposal to establish a commercial herring sac-roe fishery in the Nelson Island district and its subsequent authorization have underscored the importance of herring in the subsistence economy.

Subsistence herring use occurred in five other communities in the Nunivak Island and Kuskokwim Bay areas. Although not of the same magnitude of use as that in Nelson Island villages, the total contribution of subsistence herring use to the economy is unknown because data has not been collected for the Kuskokwim Bay communities.

Of the communities outside the Nelson Island region, Kipnuk was the only community for which harvests by all fishing families were documented in 1985 and 1987. Participation in the subsistence fishery was considerable; up to 60 percent of all households were involved in subsistence herring production in 1987 (Pete *et al.* 1987).

Table 5 summarized available subsistence herring harvest information for all the communities in the Nelson Island, Nunivak Island, and Kuskokwim Bay area. The community for which there exists the least amount of subsistence herring harvest information is Mekoryuk where households fish for herring in the Nunivak Island district. The 1990 projected returns of herring for the Nunivak Island

district are one-fifth of the total biomass necessary to allow a commercial harvest; 320 short tons are expected to return and the minimum biomass estimate to allow commercial harvest is 1,500 short tons.

Depleted herring stocks within the past several decades resulted in hardships for fishing families in the Nelson Island area. Procuring herring became very time-consuming and expensive. Other resources were harvested to substitute for the decrease in stores of herring. In 1984, when local representatives of the Alaska Department of Fish and Game, Division of Commercial Fisheries, explained the inevitability of commercial utilization of herring surpluses, local residents reluctantly supported commercialization of Nelson Island herring stocks. The commercial fishery has provided important local options for securing monetary income. With declines in projected herring returns, local residents have expressed the most concern over the opportunity for continued and sustained levels of subsistence use.

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APPENDIX 1. SURVEY METHODOLOGY

Throughout the three years of the project, this research employed several data gathering methods consisting of systematic survey, selective mapping sessions, topically-focused interviews, formal (*i.e.*, meeting-setting) and informal discussions, participant observation, and literature reviews. Each year fieldwork was conducted by up to four researchers occurred through all phases of the subsistence fishery, from harvesting, through processing and drying, to the early stages of storing of dried herring, during a time span of over one month.

Each year, a letter introducing and asking permission to conduct the research was sent to village officials in Newtok, Tununak, Toksook Bay, and Nightmute in early spring (April). Follow-up telephone calls to village officials to invite questions and input or to schedule informational village meetings, if necessary, were made in late April and early May. Additionally, Tununak was the subject of a study of wider scope in which the herring fishery research was a component. The community was already informed about this phase of the project and approved it. After approval to administer the surveys was obtained, telephone contact with community officials was maintained to provide current information on ice conditions and movements and the commercial and subsistence herring fishing activities. This contact helped to contribute to logistical planning for the research team.

The senior researcher throughout the three study years was bilingual in Yup'ik and English. In 1986, an additional member of the research team was bilingual, also. In other years, local, bilingual assistants were employed as needed to assist the non-Yup'ik speaking researchers.

During the first year, the initial task in each community was the compilation of a current household census. Existing community lists or tribal rolls in the city or tribal council offices or health clinics were updated with residents of each community. The household censuses were reviewed and made current each year.

The survey was administered to members of every household that was designated as a "rack manager" of the subsistence herring production units in each community resulting in a complete (100 percent) census of subsistence herring fishing families. A survey instrument was used to record herring

harvest levels, times, gear, role in production of dried herring, facilities, effort in harvest of roe-on-kelp, and areas used (Appendix 2). For racks with logs laid horizontally on vertical posts, subsistence herring harvest estimates were calculated by selecting the longest, shortest, and most medium length strings of drying herring on every rack. The number of herring were counted and the total of the three averaged, to arrive at an average estimate of the number of herring per string. The number of strings per rack were counted and multiplied by the average number of herring per string to estimate total number of herring per rack. For "teepee-style" racks, each herring was counted because the strings of herring on this type of rack were tied together in a spiral around the teepee rack, making it difficult to account for the length of strings of herring.

In 1986, the first year of the project, sections of U.S. Geological Survey maps (1:63,360 scale) depicting the surrounding areas of each community were attached to survey forms. The maps were used to accurately record herring fishing, roe-on-kelp, and beach grass collecting areas during each survey interview session. Current aerial photographs by the Alaska Department of Community and Regional Affairs were obtained from the city offices and were utilized as base maps on which herring drying racks and processing facilities were delineated and assigned to their respective owners. The Tununak photograph did not include critical areas of the beach on which the drying racks were constructed. The map of its herring facilities was drafted relative to structures in the photograph. As there was no photograph of Umkumiut, all structures in that camp were sketched from ground observations. The length and height of log post-and-beam racks and the height and breadth of the base of "teepee-style" racks was measured. Changes or additions to rack maps were made each year.

All researchers directly observed and, for limited time periods, participated in herring fishing and processing. Discussions at these times provided important information to the understanding of the subsistence herring fishery. For example, researchers learned the method of distinguishing between "fatty" and "non-fatty" herring while helping with processing.

At the end of each field season, survey data were compiled and entered into the computer using Lotus 1-2-3 software for data analysis. Reports were completed in 1986 and 1987. Information in the 1988 season was summarized in tabular form.

APPENDIX 2

Subsistence Herring Fishery Survey
Division of Subsistence, Spring 1988

Village: _____ H.H.#: _____

Fishing time: (Calendar days)
No. of days (_____) TOTAL DAYS: _____

Set net site: _____ Drift area: _____

Gear type: Net length _____ Mesh size _____ Boat type _____ Length _____

Harvesting and processing:

Who fished? _____ Relationship to H.H. Head _____

Who processed? _____

Harvest levels: 1 2 3 4 5 6 7

Rack length(s): _____ / _____ / _____ / _____ / _____ / _____ / _____ / _____

Rack height(s): _____ / _____ / _____ / _____ / _____ / _____ / _____ / _____

Percent full: _____ / _____ / _____ / _____ / _____ / _____ / _____ / _____

No. of strings: _____ / _____ / _____ / _____ / _____ / _____ / _____ / _____

No. of herring: _____ / _____ / _____ / _____ / _____ / _____ / _____ / _____

No. of strings *ullipengayit*: _____ TOTAL NO. STRINGS: _____

TOTAL NO. HERRING: _____

Elquat (herring roe-on-kelp) collected: Yes _____ No _____

Where collected: _____ Quantity collected: _____

Tapernat (beach grass) collection area or source: _____

General information: (Use back of page if necessary)

COOK INLET COALITION

**C/O Susie Kaiser
P.O. Box 110381
Anchorage, AK 99511**

January 16, 1990

North Pacific Fishery
Management Council
605 West 4th Avenue
P.O. Box 103136
Anchorage, AK 99501

Re: 1990 Groundfish Fishery Management Plan Amendment Cycle

Dear Council Representatives:

The Cook Inlet Coalition, an organization consisting of Southcentral Alaskan sport and commercial fishermen, would like to request that the North Pacific Fishery Management Council include pacific salmon by-catch in any amendment analysis undertaken this year. This topic was discussed at length at a recently held Coalition meeting and a motion was made (and unanimously passed) which requests the following:

1. The Coalition is aware of a potential significant salmon by-catch in the Central and Western Gulf groundfish fisheries and sincerely hope that these incidental catches can be minimized.
2. Incidental harvested salmon directly impacts the viable economic value of commercial, sport and personal use fisheries.
3. We are aware of data suggesting foreign and joint venture harvests ranging from 30,000 to 76,000 salmon in the early 1980's. But, in the domestic groundfish fisheries there has been almost no observer coverage, therefore no data is available. We have received reports of up to 400,000 salmon taken in some Central Gulf trawl fisheries. While unsubstantiated, these reports cause salmon fishermen major concern.

4. The Coalition applauds the Council's new observer program which will undoubtedly result in a new data base which will be extremely valuable in identifying the full magnitude of this issue. However, we believe that salmon by-catch is too important an issue to wait until the observer program is fully underway. Therefore, we are asking the Council to begin immediate analysis.

The Coalition respectfully requests the Council to take this issue under consideration at this time.

Thank you for your attention in this important matter.

Sincerely,

The Cook Inlet Coalition
C/O Susie Kaiser

Enclosure: Page of Agreement

cc: Coalition Members

COOK INLET COALITION
MEMBERSHIP

PAGE OF AGREEMENT

1. Kenai Peninsula Fishermens Association

John B. Hage
(Signature of Representative)

Date 1/13/90

2. North Pacific Fisheries Association

Donna Corazza
(Signature of Representative)

Date 1/13/90

3. Alaska Sportfishing Association

Donna Corazza
(Signature of Representative)

Date 1/13/90

4. Kenai River Sportfishing Association

Donna Corazza
(Signature of Representative)

Date 1/13/90

5. Cook Inlet Professional Sportfishing Association

Donna Corazza
(Signature of Representative)

Date 1/13/90

6. Northern District Setnetters of Cook Inlet

John Jorgensen
(Signature of Representative)

Date 1/13/90


7. United Cook Inlet Drift Association

John Matthews
(Signature of Representative)

Date 1/30/90

MEMORANDUM

TO: Council, SSC, and AP Members

FROM: Clarence G. Pautzke
Executive Director 

DATE: January 9, 1990

SUBJECT: General Groundfish

ACTION REQUIRED

Receive status report on emergency actions and regulatory amendments; take further action as necessary.

BACKGROUND

During the December 1989 meeting, the Council requested emergency action on the following issues:

1. Pollock roe stripping

NMFS has prepared an emergency rule which prohibits pollock roe stripping in the GOA and BSAI [item D-1(c)(1)]. The rule defines roe stripping as retention on board of pollock roe in excess of 7% of all pollock products on board the vessel, in round weight equivalents. Various product recovery rates are specified in the rule. The rule has been sent to the Secretary for review, and implementation is expected by late January or early February. NMFS representatives will be available to answer questions.

2. Quarterly apportionment of Gulf of Alaska halibut PSC

NMFS has prepared an emergency rule which would apportion the Amendment 18 halibut PSC limits by quarter. The emergency rule will expire after 180 days, so only the first two quarters of the year are affected. The halibut PSC apportionments are:

Trawl gear: 30% first quarter (600 mt)
30% second quarter (600 mt)
40% remainder of the year (800 mt)

Fixed gear: 20% first quarter (150 mt)
60% second quarter (450 mt)
20% remainder of the year (150 mt)

Unused PSC from one time period will be rolled into the next. The rule will be sent to Secretarial review on January 12 and is expected to take effect early in February.

3. Quarterly apportionment of the Gulf pollock TAC

Instead of an emergency rule, NMFS has recommended that quarterly allocation of the pollock quota in the Western/Central Regulatory Area be accomplished by inseason adjustment. The Council's intent is to apportion the 63,750 mt pollock for the Western/Central Area as follows:

Quarter 1:	11,250 mt W/C 6,250 mt Shelikof
Quarter 2:	17,500 mt W/C
Quarter 3:	17,500 mt W/C
Quarter 4:	17,500 mt W/C

NMFS has incorporated these apportionments in the final groundfish fishery specifications notice sent to the Secretary on January 2, 1990. The Notice is expected to be filed with the Federal Register within two weeks.

4. Directed Fishing Definition

The regulatory amendment to change the definition of directed fishing is undergoing Secretarial review. NMFS expects the rule to be published in the Federal Register soon with an expected effective date in early February.

5. Pot gear rigged to minimize halibut bycatch

At the June 1989 meeting, the Council adopted a measure to prohibit groundfish pot gear that was not rigged to minimize halibut bycatch. NMFS published an Advanced Notice of Proposed Rulemaking to inform the fleet of this issue and to gather suggestions from industry on this proposal [item D-1(c)(2)]. During the December 1989 meeting, the Council suggested convening a meeting with industry to collect ideas on appropriate pot design or modifications that would accomplish the intended objectives. Therefore, Council member Bob Alverson chaired an industry meeting on December 20, 1989 in Seattle at the AFSC. A report on that meeting is under item D-1(c)(3). Public comments are under item D-1(c)(4). NMFS recommends that either a regulatory amendment or a full plan amendment be prepared, with the latter favored given the likelihood of other gear amendment analysis in the 1990 amendment cycle. The PAAG has recommended this as a high priority issue [see item D-1(a)(1)].

6. Other regulatory amendments

The following regulatory changes were published in the Federal Register January 2, 1990 and are effective January 26 [see item D-1(c)(5)]:

- (a) Establish single species rule in GOA,
- (b) Provide for reopening a prematurely closed fishery in GOA and BSAI,
- (c) Specify noon as starting and ending time for all fishing seasons in GOA and BSAI, and
- (d) Require fixed gear fishermen to mark gear in GOA and BSAI.

on the environmental assessment until [insert date 30 day after date of filing].

ADDRESS: Copies of the environmental assessment may be obtained from Steven Pennoyer, Regional Director, National Marine Fisheries Service, P.O. Box 21668, Juneau, AK 99802.

FOR FURTHER INFORMATION CONTACT: Susan J. Salveson (Fishery Management Biologist NMFS), 907-586-7230.

SUPPLEMENTARY INFORMATION:

Background

The domestic and foreign groundfish fisheries in the Gulf of Alaska and Bering Sea and Aleutian Islands areas are managed by the Secretary according to fishery management plans (FMPs) prepared by the Council under the authority of the Magnuson Fishery Conservation and Magnuson Act (Magnuson Act). The FMPs are implemented by regulations for the foreign fisheries at 50 CFR Parts 611.92 and 611.93 and for the U.S. fisheries at 50 CFR Parts 672 and 675. General regulations that also pertain to the U.S. fisheries are implemented at 50 CFR Part 620.

Currently, types of processing that occur in the Alaskan groundfish fisheries are not restricted. During winter and early spring (January - April), portions of the trawl fleet target on pre-spawning aggregations of pollock. Female pollock taken during this period contain eggs or roe, which is a valuable product in Asian markets. Although some groundfish processors do not utilize the roe, most do. Some processors extract the roe from the females, and further process the female carcasses (and the males) into products such as fillets, surimi, or fish meal. Other processors extract only roe, discarding the female carcasses and males. This practice is called roe stripping. Extraction of only the roe results in a lower physical yield

(recovery rate) than other processing techniques such as fillet or surimi production. Roe stripping, however, is economically attractive because the roe product is relatively more valuable than other pollock products, and some processors can process more tons of pollock per day by foregoing further processing.

Factory trawlers that are equipped to produce headed and gutted products but not fillets, surimi, or meal comprise the bulk of the operations that extract only roe during the entire roe fishery. The operations that extract only roe during part of the roe fishery are much more diverse. Some may only practice roe stripping for short periods of time when harvesting capacity exceeds processing capacity. This may occur due to either intense fisheries at the height of the spawning season or to processing equipment failure. Other operations that are capable of producing other products may choose to roe strip because it is more profitable for them to do so given the current management regime.

If action is not taken, on-shore processing plants will probably not receive what they consider to be adequate protection from the competition of the at-sea processing fleet in the Gulf of Alaska pollock fishery. The same may be true for the Bering Sea/Aleutian Islands area in 1990. An increased proportion of the total allowable catch (TAC) for pollock will be taken by the end of the roe season, and the proportion of the catch that is used solely to produce roe will likely increase. This situation is a consequence of the continuing expansion of the fishery and the increasing incentive for each participant in the fishery to harvest and process pollock as rapidly as is individually economically feasible.

The Council is developing amendments to the Fishery Management Plan for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area and to the Fishery Management Plan for Groundfish of the Gulf of Alaska (groundfish FMPs) that address

the issue of roe stripping. The Council, at its April 1990 meeting, will consider whether these amendments should be submitted to the Secretary for review. Pending Secretarial approval, the amendments would not go into effect until the 1991 roe season. At its December 1989 meeting, therefore, the Council recommended that the Secretary implement an emergency rule that would prohibit the extraction of roe from pollock during 1990, unless male and female carcasses are further processed into products of commercial commerce.

The Council recommended this action for the following reasons: (1) roe stripping is wasteful of commercially useful fish protein; (2) roe stripping allows for rapid processing of pollock catches which accelerates the harvest of the total allowable pollock catch, thereby compressing the pollock fishery in time and preempting other pollock fisheries later in the year. During 1989, this preemption caused socioeconomic hardship for on-shore processing operations that had anticipated the opportunity to harvest and process Gulf of Alaska pollock during the last half of the year; and (3) concern by the Council that targeting on spawning concentrations of pollock may adversely affect the future abundance of declining pollock stocks and the marine resources that use pollock as a prey species. Although the Council's Scientific and Statistical Committee advised the Council of the lack of evidence to indicate that roe stripping has a negative impact on pollock stocks, the Council recommended a conservative management approach for the pollock roe fishery until more information is available on the effects of this fishery on pollock populations and on northern sea lions and other marine mammals and birds that depend on pollock for food.

Section 305(e)(2)(B) of the Magnuson Act provides authority to the Secretary to promulgate temporary emergency regulations to resolve emergency problems in any fishery. Under this section, the Secretary may implement an emergency rule in response to recommendations made by the Council.

For the reasons stated above, the Secretary concurs with the Council's recommendation that pollock roe stripping creates an emergency in the Alaskan groundfish fisheries and should be prohibited during the 1990 pollock roe season. Although the Council had explicitly expressed its desire to prohibit roe stripping in at-sea and on-shore processing operations, the Secretary's legal counsel has advised that the Magnuson Act does not provide the authority to directly regulate processing by on-shore processing facilities. Nonetheless, the Secretary encourages on-shore operations to avoid the practice of roe stripping in furtherance of Council objectives. The Secretary and the Council will consider the extent to which on-shore operations comply with the Council's intent during the development of future amendments that address roe stripping and the impact of this practice on other groundfish fisheries, including on-shore operations.

This emergency rule and any subsequent regulatory action by the Secretary do not prejudice the Council's amendments being developed to address the issue of roe stripping. The Secretary may approve, disapprove, or partially disapprove that amendment as provided under the Magnuson Act.

Description of Emergency Interim Measure

The amount of pollock roe retained by an at-sea processor may not exceed seven percent of the round weight equivalent of pollock and pollock product retained on board the processor vessel at any time during a fishing trip. This value is slightly higher than the overall average pollock roe recovery rate of 6.5 percent (total weight of roe divided by total weight of pollock landed) derived by NMFS from 1983 - 1985 foreign observer data. The pollock roe fishery does, however, experience a wide variance in roe recovery rates (rates may range from 3 to 17 percent depending on male to female catch ratio, size and maturity of

fish, area, time of year, hydration of roe sac, size of catch etc.).

A seven percent pollock roe recovery rate assumes that the pollock sex ratio is about equal, thus discouraging targeting on only the female component of the spawning stock. This rate will, however, allow for the discard of small pollock unsuitable for processing into products other than meal.

The product recovery rates that will be used to extrapolate round weight equivalents from product weights are as follows:

Pollock Product Type	Pollock Product Recovery Rate
Fillet (no skin or ribs)	25 percent
Minced	25 percent
Surimi	22 percent
Meal	17 percent
Headed and Guttled	55 percent
Roe	7 percent

The above rates are based on product recovery rates reported by observers on board foreign processor vessels during the 1983 - 1985 pollock roe seasons. These values may differ from average annual recovery rates for the same products due to seasonal variation in flesh quality. If pollock are processed into products other than those listed above, extrapolated round weight equivalents will be based on the best available information, including observer or vessel operator reported product recovery rates.

Additional data on product recovery rates will be collected by domestic observers during 1990. This information will contribute towards a more long-term solution to issues surrounding the pollock roe fishery under amendments to the groundfish FMPs that are being developed by the Council.

Examples of the procedure that will be used to derive allowable pollock roe retention during the 1990 roe fishery follow:

Allowable roe in a fillet or minced product operation - If the total pollock fillet and/or minced product on board a vessel is 200 metric tons (mt), the allowable roe retention is calculated as follows: $(200 \text{ mt product weight}) / (.25 \text{ product recovery rate}) = 800 \text{ mt extrapolated round weight}$. The allowable roe retention is $(800 \text{ mt round weight}) \times (.07 \text{ roe recovery rate}) = 56 \text{ mt roe product}$.

Allowable roe in a H & G operation - If the total pollock H & G product on board a vessel is 200 mt, the allowable roe retention is calculated as follows: $(200 \text{ mt product weight}) / (.55 \text{ product recovery rate}) = 363.6 \text{ mt extrapolated round weight}$. The allowable roe retention is $(363.6 \text{ mt round weight}) \times (.07 \text{ roe recovery rate}) = 25.5 \text{ mt roe product}$.

Allowable roe in a surimi and meal operation - If large pollock are processed into a surimi product (total surimi product on board equals 250 mt) and additional pollock are processed into meal (total pollock meal on board, excluding that produced from by-products of surimi production, equals 50 mt), the allowable roe retention is calculated as follows: $[(250 \text{ mt surimi product weight}) / (.22 \text{ surimi recovery rate})] + [(50 \text{ mt pollock meal}) / (.17 \text{ meal recovery rate})] = 1,430 \text{ mt extrapolated round weight}$. Allowable roe retention is $(1,430 \text{ mt round weight}) \times (.07 \text{ roe recovery rate}) = 100.1 \text{ mt roe product}$.

The mandatory logbook program implemented under Amendment 13/18 to the groundfish FMPs (54 FR 50386, December 6, 1989) requires that species product types and product weights be recorded on a daily basis and that primary and additional products from the same fish be identified. Enforcement of this roe stripping prohibition will rely on pollock product

information recorded in the required daily cumulative production logbooks, weekly production reports that provide cumulative weekly production information from the logbooks, product transfer logs, and on-site inspection of product inventory.

The Secretary expects that the action taken under this emergency rule will (1) discourage targeting on the female component of spawning pollock stocks and make roe stripping operations less attractive; (2) reduce the rate at which allowable pollock quotas are harvested in the roe season; and (3) provide fuller utilization of the pollock resource and reduce wastage of useable fish protein.

This action will reduce the pace of the roe fishery because it may eliminate some operations from the fishery and reduce the processing capacity of others. This action alone, however, will not guarantee the opportunity for directed pollock fisheries after the roe season, particularly in the Gulf of Alaska. In the Gulf, the pollock TAC is small and the harvesting and processing capacity of operations that can process products other than just roe is sufficient to harvest the entire pollock TAC within the roe season. NMFS survey information indicates that approximately nine on-shore processors in the Kodiak area expect to undertake pollock surimi and fillet operations during the last half of 1990. If pollock is not available to these summer and fall operations due to accelerated harvests during the roe season, they will encounter severe economic hardship. In response to this and other conservation concerns, the Secretary has implemented a seasonal apportionment of the pollock TAC in the Gulf of Alaska (55 FR XXXXX, January XX, 1990) that further limits the allowable harvest of pollock during the 1990 roe fishery.

The situation is different in the Bering Sea and Aleutian Islands Area because domestic harvesting and processing capacity is not sufficient to take the combined TAC in that area by the

end of the roe fishery. Therefore, for 1990, the restriction on pollock roe-stripping operations will tend to reduce the Bering Sea/Aleutians area pollock catch during the roe fishery.

Vessels not equipped to process pollock beyond roe extraction (head and gut processors) will be negatively impacted by this action and could be eliminated from the pollock fishery if they are unwilling to process male and female pollock carcasses into headed and gutted product. During 1989, about 25 vessels fell into this category. Roe production might subsidize the production of headed and gutted product, enabling these vessels to remain in the fishery, albeit at a lower level of profit.

Classification

The Assistant Administrator for Fisheries, NOAA (Assistant Administrator), has determined that this rule is necessary to respond to an emergency situation and that it is consistent with the Magnuson Act and other applicable law.

The Assistant Administrator also finds that reasons justifying promulgation of this rule on an emergency basis also make it impracticable and contrary to the public interest to provide notice and opportunity for prior comment or to delay for 30 days its effective date under section 553 (b) and (d) of the Administrative Procedure Act.

The Assistant Administrator has determined that this rule will be implemented in a manner that is consistent to the maximum extent practicable with the approved coastal zone management program of the State of Alaska. This determination has been submitted for review by the responsible State agency under section 307 of the Coastal Zone Management Act.

This emergency rule is exempt from the normal review procedures of Executive Order 12291 as provided in section 8(a)(1) of that order. This rule is being reported to the Director of the Office of Management and Budget with an explanation of why following the usual procedures of that order is not possible.

The Assistant Administrator prepared an EA for this rule and concluded that no significant impact on the human environment will occur. A copy of the EA is available from the Regional Director at the above address.

This rule does not contain a collection of information requirement for purposes of the Paperwork Reduction Act.

The Regulatory Flexibility Act does not apply to this rule because, as an emergency rule, it is not required to be promulgated as a proposed rule and the rule is issued without opportunity for prior public comment. Because notice and opportunity for comment are not required to be given under section 553 of the Administrative Procedure Act, and because no other law requires that notice and opportunity for comment be given for this rule, no initial or final regulatory flexibility analysis has been or will be prepared under sections 603(a) and 604(a) of the Regulatory Flexibility Act.

List of Subjects

50 CFR Part 611

Fisheries, Foreign fishing.

50 CFR Parts 672 and 675

Fisheries, Reporting and recordkeeping requirements.

Dated:

[insert name and title of responsible official]

For the reasons set out in the preamble, 50 CFR Parts 611, 672 and 675 are amended as follows:

1. The authority citation for Part 611 continues to read as follows:

Authority: 16 U.S.C. 1801 et seq., 16 U.S.C. 971 et sea., 22 U.S.C. 1971 et seq., and 16 U.S.C. 1361 et seq.

2. In section 611.92, paragraph (c) is amended by adding paragraph (c)(3) to read as follows:

611.92 Gulf of Alaska Groundfish Fishery

* * * * *
(c) * * *

(3) Allowable retention of pollock roe. See 50 CFR Part 672.20(i) for procedures used to determine the allowable amount of pollock roe that may be retained onboard a foreign processor vessel at any time during a fishing trip.

* * * * *

3. In section 611.93, paragraph (c) is amended by adding paragraph (c)(6) to read as follows:

611.93 Bering Sea and Aleutian Islands Groundfish Fishery.

* * * * *
(c) * * *

(6) Allowable retention of pollock roe. See 50 CFR Part 675.20(i) for procedures used to determine the allowable amount of pollock roe that may be retained onboard a foreign processor vessel at any time during a fishing trip.

* * * * *

PART 672 - GROUND FISH OF THE GULF OF ALASKA [AMENDED]

4. The authority citation for Part 672 continues to read as follows:

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

5. In Section 672.20, a new paragraph (i) is added to read as follows: [assumes directed fishing rule in place]

672.20 General limitations

* * * * *

(i) Allowable retention of pollock roe. Pollock roe may comprise no more than seven percent of the total round weight equivalent of pollock and pollock products retained onboard a vessel at any time during a fishing trip.

(1) Assumed product recovery rates used to extrapolate round weight equivalents. The following product recovery rates will be used to calculate round weight equivalents:

- (A) Pollock surimi - 22 percent;
- (B) Pollock fillets - 25 percent;
- (C) Pollock minced product - 25 percent;
- (D) Pollock meal - 17 percent;
- (E) Pollock headed and gutted - 55 percent; and
- (F) Pollock roe - 7 percent

(2) Other product recovery rates. Round weight equivalents for products not listed under paragraph 672.20(i)(1) will be based on the best available information, including recovery rates reported by observers or vessel operators.

(3) Fishing trip. For purposes of this paragraph, a vessel is engaged in a single fishing trip when commencing or continuing fishing during the period of time from [INSERT EFFECTIVE DATE OF EMERGENCY RULE] until any transfer or offload of any pollock or pollock product or until the vessel leaves the regulatory area where fishing activity commenced, whichever comes first.

* * * * *

PART 675--GROUND FISH OF THE BERING SEA AND ALEUTIAN ISLANDS
AREA [AMENDED]

6. The authority citation for Part 675 continues to read as follows:

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

7. In Section 675.20, a new paragraph (i) is added to read as follows: [assumes directed fishing rule in place]

675.20 General limitations

* * * * *

(i) Allowable retention of pollock roe. Pollock roe may comprise no more than seven percent of the total round weight equivalent of pollock and pollock products retained onboard a vessel at any time during a fishing trip.

(1) Product recovery rates used to extrapolate round weight equivalents. The following product recovery rates will be used to calculate round weight equivalents:

- (A) Pollock surimi - 22 percent;
- (B) Pollock fillets - 25 percent;
- (C) Pollock minced product - 25 percent;
- (D) Pollock meal - 17 percent;
- (E) Pollock headed and gutted - 55 percent; and
- (F) Pollock roe - 7 percent

(2) Other product recovery rates. Round weight equivalents for products not listed under paragraph 675.20(i)(1) will be based on the best available information, including recovery rates reported by observers or vessel operators.

(3) Fishing trip. For purposes of this paragraph, a vessel is engaged in a single fishing trip when commencing or continuing fishing during the period of time from [INSERT EFFECTIVE DATE OF EMERGENCY RULE] until any transfer or offload of any pollock or

pollock product or until the vessel leaves the subarea where
fishing activity commenced, whichever comes first.

* * * * *

SSALVESON:gcs/12-19-89;Rev.12-20-89/File: 1504-13-BSA-020-b

X-Ref: 1504-13-GOA-020-b

revised 12-28-89

R:\DEC\FM\POLROEST.ER

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 228

Public Hearing—Incidental Take of Marine Mammals in Beaufort and Chukchi Seas

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Notice of public hearing on proposed rule to allow an incidental take of marine mammals in the Beaufort and Chukchi Seas.

SUMMARY: The National Marine Fisheries Service is holding an additional public hearing on a proposed rule (54 FR 40703) that would allow the harassment of marine mammals during exploration for oil and gas in the Chukchi and Beaufort Seas for the next 5 years.

DATES: A hearing was held in Barrow, Alaska on November 10, 1989. An additional hearing has been scheduled for Tuesday, January 16, 1990 from 1:30 to 4 p.m. Written comments on the proposed rule are due by January 16, 1990.

ADDRESSES: Written comments on the proposed rule may be mailed to Dr. Nancy Foster, Director, Office of Protected Resources and Habitat Programs, National Marine Fisheries Service, 1335 East-West Highway, Silver Spring, MD 20910. A copy of the proposed rule may be obtained by writing to this address or from the information contact listed below. The location for the Washington, DC area hearing is the Lobby Conference Room at the above address.

FOR FURTHER INFORMATION CONTACT: Margaret C. Lorenz in Washington, DC at (301) 427-2322. Notify Ms. Lorenz if you wish to testify, and please submit a written copy of your testimony at the hearing.

Dated: December 18, 1989.

Nancy Foster,

Director, Office of Protected Resources and Habitat Programs.

[FR Doc. 89-29943 Filed 12-26-89; 8:45 am]

BILLING CODE 3510-22-M

50 CFR Part 675

[Docket No. 91165-9265]

Groundfish of the Gulf of Alaska; Groundfish Fishery of the Bering Sea and Aleutian Islands Area

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Advance notice of proposed rulemaking.

SUMMARY: NOAA issues this advance notice of proposed rulemaking (ANPR) to make the public aware of a proposal to implement regulations that would prohibit the use of pots in the Gulf of Alaska and Bering Sea and Aleutian Islands area groundfish fisheries conducted in the exclusive economic zone off Alaska other than those that are modified or constructed to minimize the catch of Pacific halibut. This ANPR is in response to a recommendation made by the North Pacific Fishery Management Council (Council) that a rulemaking be proposed that would reduce the incidental catch of Pacific halibut in pots used in the groundfish fishery. By this action, NMFS is soliciting public comments on possible modifications of groundfish pot gear that would effectively reduce the catch of Pacific halibut.

DATE: Comments are invited through February 26, 1990.

ADDRESS: Comments on this ANPR may be sent to Steven Pennoyer, Director, Alaska Region, National Marine Fisheries Service, P.O. Box 21668, Juneau, AK 99802-1668.

FOR FURTHER INFORMATION CONTACT: Ronald J. Berg (Fishery Management Biologist, NMFS), 907-588-7230.

SUPPLEMENTARY INFORMATION:

Background

At its June 20-23, 1989, meeting, the Council requested that NMFS prepare a regulatory amendment that would prohibit the use of pots in the groundfish fisheries that do not reduce the catch of Pacific halibut (halibut) below levels being experienced with pots of contemporary design. The purpose underlying the Council's recommendation is to reduce halibut bycatches by requiring each groundfish pot be modified or constructed in such a way that halibut could not easily enter it. Reduced halibut bycatch would foster

the Council's objective to develop management measures that encourage the use of gear that reduces the discard of fish, including prohibited species such as halibut, which are caught as bycatch in groundfish fisheries.

Discussions with management personnel in the Alaska Department of Fish and Game (ADF&G) suggest that merely partitioning the pot opening into smaller openings may accomplish this objective. Narrow openings impede entry by halibut but do not impede entry by groundfish species targeted with pot gear, such as Pacific cod. Partitioning the pot opening might be accomplished by tying strong cords vertically across the vertical plane of a pot opening in such a way that either side of the partitioned opening would be no more than about eight inches. It might also be accomplished by constructing a pot opening that has a width of no more than 8 inches, with no restrictions on the height of the opening.

Data to define the extent of the halibut bycatch problem in groundfish pot fisheries are scarce. However, data are available from crab indexing surveys using pot gear near Kodiak, Island, which were conducted in summer months during 1972-1980 by the ADF&G. This data indicate the potential problem of halibut bycatch in groundfish fisheries using pots. Total numbers of pots checked annually during these years ranged from 895 to 2,390. During these years, a total of 16,079 pots were checked, and 4,158 halibut were caught for an average catch rate of 0.26 halibut/pot.

In contrast, the ADF&G monitored four commercial pot vessels in the Kodiak area during 1987-1988. These vessels used crab pots to fish for Pacific cod. Each pot was modified in various ways to reduce the catch of halibut. Some modifications were accomplished simply by partitioning the pot opening along the vertical plane by tying heavy twine at eight inch intervals, thereby forming openings narrower than the single wide entrance. During these years, ADF&G monitored 667 pot lifts. Forty-five halibut were caught for an average catch rate of 0.07 halibut/pot. Although the catch rate by modified pots is small, the results cannot be compared to those from the king crab index surveys, because the time series and fishing locales are different.

Nonetheless, information from ADF&G personnel who are familiar with fisheries in the Kodiak area suggests that narrow pot openings significantly reduce halibut bycatch.

Use of pots is not currently common in the groundfish fisheries. The NMFS Enforcement Official database lists 32 vessel owners who have recorded use of pots on their vessel groundfish permit, but few of these vessels have fished groundfish in 1989. Pot catches of groundfish in 1989 total about 100 metric tons of groundfish, most of which was Pacific cod. About 50 pots are used on each vessel. If all vessels were fishing at the same time, 1,600 pots would be employed, and if each pot were lifted

one time 112 halibut would be caught, assuming each pot was modified to reduce halibut bycatch and 0.07 halibut/pot was a typical catch rate. For comparison, 416 halibut would be caught, using a higher rate that might occur if unmodified pots were used (e.g., 0.26 halibut/pot observed during the king crab index surveys).

Although not much information exists to quantitatively assess the value of using modified pots to reduce halibut bycatches while not imposing an unreasonable cost to fishermen in terms of labor, manufacturing costs, or fishing time lost in modifying the pots, NMFS would consider ways to enforce such a gear regulation (e.g., prohibit the

presence on board a vessel of any pot that did not comply with the regulation). NMFS invites comments from all interested parties on options presented to reduce the catch of halibut in pots used in the groundfish fishery. In addition, comments on any other option for reducing halibut catches by any gear type are welcomed and encouraged

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

Dated: December 20, 1989.

James E. Douglas, Jr.,

Acting Assistant Administrator for Fisheries,
National Marine Fisheries Service.

[FR Doc. 89-29998 Filed 12-26-89; 8:45 am]

BILLING CODE 3510-22-M

JANUARY 1990



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

DATE: January 3, 1990

MEMORANDUM FOR: Files *Ron Berg*

FROM: F/AKR1 - Ron Berg

SUBJECT: Results of December 20, 1989 meeting with industry to recommend halibut exclusion devices in groundfish pots.

BACKGROUND

At its December 5-8, 1989 meeting, the North Pacific Fishery Management Council received a staff report on progress made on rulemaking that would require modifications of groundfish pots to reduce bycatches of Pacific halibut. NMFS informed the Council that an advance notice of proposed rulemaking was being published that would request the industry to provide ideas about how groundfish pots might be designed to minimize halibut bycatches. Council member Bob Alverson suggested that the industry convene a discussion group of interested persons to provide input for minimizing halibut bycatches.

The discussion group (see participant list, below) met at the Alaska Fisheries Science Center on December 20, 1989. Information presented was the following:

Fishermen want to use halibut exclusion devices in pots to keep large halibut out, because pots quit fishing if large halibut get in;

Small halibut that are caught in pots do not cause pots to cease fishing and often escape through the opening;

A standard pot opening with a rigid opening is 9" high by 36" wide;

Fishermen recommend the 36" width be split on the vertical plane to create two 18" wide openings;

A 18" wide opening is necessary even though the widest Pacific cod may be up to 12 inches in width, because additional room is required to accommodate movement of the Pacific cod as it strives to enter the pot;

Halibut bycatch in groundfish pots is a problem in the Gulf of Alaska but not in the Bering Sea;



A Bering Sea study indicated that 367 pot lifts of pots equipped with Tanner crab boards caught zero halibut.

Halibut are caught as bycatch in groundfish pots, at least in the Gulf of Alaska. As more fishermen fish for Pacific cod in the Gulf, bycatch problems will increase. Because fishermen are already using halibut exclusion devices on groundfish pots, however, a regulation that requires them to do so seems unnecessary. NMFS promulgates regulations only when necessary for conservation and management of the fishery and when benefits from regulations outweigh costs. On the other hand, the concept of halibut exclusion devices appear to be accepted by the industry. Requiring exclusion devices, therefore, would not be controversial. A regulation that is "on the books" serves the purpose of informing the industry about acceptable modifications such as halibut exclusion devices on pots. New users of pot gear could better plan for such modifications when ordering or manufacturing pot gear.

RECOMMENDATION

A regulation should be proposed to require halibut exclusion devices on pot gear. A regulation could read,

"All pots used in the groundfish fishery must have tunnel openings that are no wider than 18 inches and no higher than 9 inches."

The current structure of both groundfish FMPs, however, arguably prevents halibut exclusion devices being promulgated by regulatory amendment. Amendments to the groundfish FMPs might be the preferred route, because both groundfish FMPs contain sections that address gear. For example, the Bering Sea/Aleutians Islands groundfish FMP has a section 14.4.4 Gear restrictions, but the entire text says, "None". Imposing a gear restriction by regulatory amendment seems inconsistent with the this FMP. The Gulf of Alaska groundfish FMP has a section 4.3.1.3 Gear restrictions, which has a discussion on biodegradable panels. A regulatory amendment that expands restrictions seems inconsistent with this FMP, also. For this reason, both FMPs might require amendments before a new regulation on halibut exclusion devices could be implemented.

Rather than propose a regulatory amendment as a separate action, a regulation could be proposed along with other regulations that might be needed to implement new measures during the current 1989-1990 FMP amendment cycle. Other gear modifications have been submitted for the current amendment cycle, and a proposal for halibut exclusion devices could also be

developed. I recommend that a regulation be proposed to require the halibut exclusion devices at the same time as other amendments for gear modifications are proposed in the current amendment cycle.

Persons attending the meeting included:

Bob Miller	- F/V CASCADE, Alaska Crab Coalition
Bob Alverson	- North Pacific Fishery Management Council
Frank Shaw	- NMFS/AFSC
Norman Parks	- NMFS/AFSC
Harold Zanger	- NMFS/AFSC/RACE
John van Amerongen	- Alaska Fishermen's Journal
Arni Thompson	- Alaska Crab Coalition
Bob Wyman	- Neptune Trap & Trigger
Greg Eagle	- Commercial fisherman
Bob Wood	- F/V SHELIKOF
P. Knusland	- Norsol, Inc.
Larry Hendricks	- Got Ya's
Ron Berg	- NMFS/ Alaska Region
Gregg Williams	- IPHC
Bob Scofield	- Dorian Metal Fab.
Ted Smits	- North Pacific Fishing Vessel Owners Assoc.

JAN 5 1990 14:39 FROM ALASKA CRAB COALITION TO NPFMC AND

AGENDA D-1(c)(4)
JANUARY 1990



ALASKA CRAB COALITION

3901 Leary Way (Bidg.) N.W., Suite #6 • Seattle, WA 98107 • (206) 547-7560 • FAX (206) 547-0130

January 5, 1990

Mr. Clarence G. Pautzke,
Executive Director
NPFMC
P.O. Box 103136
Anchorage, Alaska

Dear Clarence:

I am writing concerning Agenda Item D-1C, General Groundfish, regulatory action on prohibition of groundfish pots without halibut exclusion devices.

ACC boat owners have been actively involved with the development and use of modified crab pots, converted to groundfish pots for Pacific cod, both in the Bering Sea and the Gulf of Alaska for four years. Development has included the use of vertical spacers in the tunnels to exclude the entry of halibut.

The ACC does actively support the development of a reasonable regulation to groundfish pots, to exclude the entry of halibut. Such a regulation should be structured carefully, such that it does not restrict the opening to the pots to the extent that it precludes large cod from being caught. This will dramatically reduce the CPUE in the fishery to the point where the pots are not a profitable operation.

Exclusion devices should also be of a temporary nature, such that the same gear can also be used for crab fisheries. Permanent devices would require the fishermen to purchase an entire new set of gear. Plastic snap ties or twine are sufficiently strong as vertical spacers.

I also attach a summary bycatch report from the 1989 Bairdi crab fishery in Zone 1, utilizing two NMFS certified observers. The report shows zero bycatch of halibut, during a nine day fishing trip. The pots were equipped with standard "tanner boards" to reduce the entry of king crab. I would appreciate it if you could circulate this letter and the bycatch summary to the Council Members, AP and SSC for the January meeting.

Sincerely,

Arni Thomson, Executive Director



ALASKA CRAB COALITION

3901 Leary Way (Bldg.) N.W., Suite #6 • Seattle, WA 98107 • (206) 547-7560 • FAX (206) 547-0130

August 1, 1989

EAST BERING SEA BAIRDI FISHERY, CRAB SHIPBOARD SAMPLING REPORT, APRIL 26 - MAY 5, 1989

INTRODUCTION: The Alaska Crab Coalition, in cooperation with the NMFS and the ADF & G, contracted two NMFS approved and experienced observers from the Foreign Fisheries Observer Program to conduct onboard sampling, measuring and counting of target and bycatch species aboard a crab vessel targeting on bairdi crab. Both observers were deployed aboard the same vessel to conduct an intensive sample. The vessel fished 9 days and set and hauled a total of 815 pots, or an average of 90 pots per day. The observers sampled 45% of the pots, or a total of 367 pots during the period of 9 days. Fishing was characterized as slow and the CPUE comparatively low. All fishing occurred in Zone 1, west of 163 degrees West Longitude.

<u>SPECIES</u>	<u>TOTAL CATCH IN NUMBERS</u>	<u>AVERAGE CATCH PER POT</u>
BAIRDI:		
Legal male bairdi	6,104	16.6
Sublegal male bairdi	13,140	35.8
Female bairdi	<u>1,470</u>	<u>4.0</u>
Total bairdi	20,710	56.4
RED KING CRAB:		
Legal male king crab	640	1.7
Sublegal male king crab	2757	9.3
Female king crab	<u>796</u>	<u>2.2</u>
Total king crab	4193	13.2
HALIBUT:	0	0
OPIILIO CRAB:	371	1.0
PACIFIC COD:	595	1.6

COMMENTS AND CONCLUSIONS: The handling of non-utilized organisms aboard the vessel generally allowed them to be returned to the sea quickly, and apparently with little bodily damage. During ordinary fishing operations, most of

the animals brought aboard were out of the water for less than five minutes. Most observed accidental damage to crabs was inflicted upon recently molted king crab, whose new exoskeletons had not yet fully hardened. An offhand estimate of perhaps three to five per cent of the king crab brought aboard sustained observable damage. The estimate of king crab accidentally receiving fatal injuries, or of injured tanner crabs, would be considerably lower. Also, if the toll taken on Pacific cod is excepted, it can be stated that the commercial bairdi tanner crab fishery, when conducted properly and conscientiously, is a low-impact fishery which produces a minimal and possibly insignificant adverse effect upon the stocks of other commercially valuable species in the area, including red king crab. The majority of any incidental, human-inflicted damage upon the red king crab stocks in Bristol Bay, particularly during their vulnerable molting stage, can probably be attributed to either careless practices within the industry, or to other high-impact fisheries conducted in the area.

This rulemaking was recommended to the Secretary by the Council and contains two changes to the domestic groundfish regulations. These changes were designed to facilitate enforcement and are described below.

(1) The rule requires that groundfish species with trip limits be sorted prior to the first weighing after offloading. This rule only applies to those deliveries that exceed 3,000 pounds of groundfish (round weight or round weight equivalent).

(2) The rule prohibits possession of unauthorized fixed gear on a fishing vessel operating within the fishery unless such gear is the gear of another vessel that has been retrieved at sea, in which case such gear must be made inoperable or stowed in a manner not capable of being fished. Thus all fishing vessels would be able to retain, for the purpose of disposal on shore, derelict fixed gear which they had become entangled with and retrieved at sea. This prohibition will not apply to vessels bound for Alaska if they do not fish with fixed gear off Washington, Oregon, or California during the same trip.

This rule was proposed in the Federal Register on August 30, 1989 (54 FR 35909) with the reasons for taking such actions. Public comments were requested until September 29, 1989. No comments were received and no changes were made to the proposed rule. Therefore, the Secretary concurs with the Council's recommendations and implements this rule as proposed, for the reasons published at 54 FR 35909.

Classification

NOAA issues this final rule under authority of section 305(g) of the Magnuson Act, 16 U.S.C. 1855(g), and it is issued at the request of the Council. The Assistant Administrator for Fisheries, NOAA has determined that this rule is necessary for the conservation and management of the Pacific coast groundfish fishery and that it is consistent with the Magnuson Act and other applicable law.

The Assistant Administrator has determined that this rule falls within a categorical exclusion from the requirements of the National Environmental Policy Act, 42 U.S.C. 4321 *et seq.*, under NOAA Directive 02-10, because it is routine (i.e., would not result in any significant change from the status quo) and because it has limited potential for effect on the human environment. A biological benefit would accrue from discouraging the use of unauthorized fixed gear because detection would be more likely with shoreside enforcement. In particular,

pots without escape panels which are lost at sea continue fishing indefinitely. If use of such fixed gear is lessened, an unquantifiable benefit would result.

The Under Secretary also had determined that it is not a major rule requiring a regulatory impact analysis under Executive Order 12291.

The General Counsel of the Department of Commerce certified to the Small Business Administration that this rule will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act, 5 U.S.C. 603 *et seq.* As a result, a regulatory flexibility analysis was not prepared.

This rule does not contain a collection of information requirements for purposes of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

This rule implements the FMP and amendments for which consistency determinations have previously been made under the Coastal Zone Management Act.

This rule does not contain policies with federalism implications sufficient to warrant preparation of a federalism assessment under Executive Order 12612.

List of Subjects in 50 CFR Part 663

Fisheries, Fishing.

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

Dated: December 22, 1989.

Samuel W. McKeen,

Acting Assistant Administrator for Fisheries.

PART 663—PACIFIC COAST GROUND FISH FISHERY

For the reasons set forth in the preamble and at 54 FR 35909, 8/30/89, 50 CFR part 663 is amended as follows:

1. The authority citation for 50 CFR part 663 continues to read as follows:

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

2. In § 663.7, the introductory paragraph is revised to reference § 620.7, and paragraphs (l) and (m) are added as follows:

§ 663.7 Prohibitions.

In addition to the general prohibitions specified in § 620.7 of this chapter, it is unlawful for any person to:

(l) Fail to sort, prior to the first weighing after offloading, those groundfish species or species groups for which there is a trip limit, if the weight of the total delivery exceeds 3,000 pounds (round weight or round weight equivalent).

(m) Possess, deploy, haul, or carry onboard a fishing vessel subject to these regulations (50 CFR part 663) a set net,

trap or pot, longline, or commercial vertical hook-and-line that is not in compliance with the gear restrictions at § 663.26, unless such gear is the gear of another vessel that has been retrieved at sea and made inoperable or stowed in a manner not capable of being fished. The disposal at sea of such gear is prohibited by Annex V of the International Convention for the Prevention of Pollution From Ships, 1973 (Annex V of MARPOL 73/78).

[FR Doc. 89-30315 Filed 12-29-89; 8:45 a.m.]

BILLING CODE 3510-22-M

50 CFR Parts 672 and 675

[Docket No. 90640-9249]

RIN 0648-AC91

Groundfish of the Gulf of Alaska, Groundfish Fishery of the Bering Sea and Aleutian Islands Area

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Final rule.

SUMMARY: The Secretary of Commerce (Secretary) by this notice, amends the rules implementing the Fishery Management Plans (FMP's) for Groundfish of the Gulf of Alaska (GOA) and the Bering Sea and Aleutian Islands (BSAI) area to: (1) Authorize the closure of directed fisheries in the GOA to accommodate incidental catch needs; (2) authorize the reopening of prematurely closed fisheries in the GOA and BSAI area; (3) require fishermen to mark buoys used in pot and hook-and-line fisheries; and (4) make 12:00 noon Alaska local time the starting and ending time for groundfish fishing seasons other than the beginning and end of the calendar fishing year. By this rulemaking, several amendments are made to clarify or update existing regulations. All the amendments are necessary to optimize groundfish yields from the GOA groundfish fishery, facilitate enforcement in the GOA and BSAI groundfish fisheries, or clarify existing regulations. They are intended to further the goals and objectives contained in fishery management plans that govern these fisheries.

EFFECTIVE DATE: January 26, 1990.

ADDRESS: Copies of the documents supporting this rule may be obtained from Steven Pennoyer, Director, National Marine Fisheries Service, P.O. Box 21668, Juneau, AK 99802-1668.

FOR FURTHER INFORMATION CONTACT: Ronald J. Berg (Fishery Biologist, NMFS), 907-586-7230.

SUPPLEMENTARY INFORMATION:

Background

The domestic and foreign groundfish fisheries in the exclusive economic zone of the GOA and BSAI are managed by the Secretary under Fishery Management Plans for the Groundfish of the Gulf of Alaska and the Groundfish Fishery of the Bering Sea and Aleutian Islands Area. The FMPs were prepared by the North Pacific Fishery Management Council (Council) under the authority of the Magnuson Fishery Conservation and Management Act (Magnuson Act) and are implemented by regulations for the foreign fisheries at 50 CFR 611.92 and 611.93 and for the U.S. fisheries at 50 CFR parts 672 and 675. This final rule implements four measures governing the FMP's for the GOA and/or the BSAI. Each of these measures was recommended by the Council at its January 16-19, 1989, meeting. The first measure authorizes the closure of directed fisheries in the GOA prior to the total allowable catches (TACs) for such fisheries being reached to accommodate incidental catch needs. This authority has already been established in the BSAI. The second, third, and fourth measures apply to both the GOA and BSAI. The second measure amends regulatory text at 50 CFR 672.22(a) and 675.20(e) to authorize the reopening of fisheries that have been closed prematurely, if available catch data show that allowable harvest levels have not been reached. The third measure amends regulatory text at 50 CFR 672.23 and establishes a new § 675.23 to specify 12:00 noon, Alaska local time, as the starting and ending time for all fishing seasons other than the beginning and end of the calendar fishing year. The fourth measure amends regulatory text at 50 CFR 672.24 and adds two paragraphs to § 675.24 to require fishermen to mark their gear used in the pot and hook-and-line fisheries. In addition, this final rule makes two minor changes to 50 CFR parts 672 and 675. Paragraph (b) of § 672.23 *Seasons*, is redesignated paragraph (c) and is revised to delete reference to sablefish pots; and in § 672.24 *Gear limitations*, paragraph (a) *Biodegradable escape panels required for all sablefish pots*, is retitled and revised. Description of, and reasons for, these changes are contained in the preamble to the proposed rule. The Secretary invited comments on these measures until September 14, 1989, (54 FR 33737, August 16, 1989). No public comments were received.

On the basis of the supporting documents, Council recommendations, and rationale provided in the preamble

to the proposed rule, the Secretary finds that each of the above measures is necessary for fishery conservation and management, and is consistent with the Magnuson Act and other applicable laws.

Specific Changes From the Proposed Rule in the Final Rule

In §§ 672.2 and 675.2, *Definitions*, definitions of "setline" and "skate" are deleted, and in §§ 672.24 and 675.24, *Marking of gear*, the phrase "setline or skate" is replaced with the word "longline". These changes are made because "longline" is already defined and means the same as "setline". In § 672.20(c)(2)(iii)(A) under *Procedure*, paragraphs (c)(2)(iii)(A) (1) and (2) are combined into (c)(2)(iii)(A) without changing the intent of the *Procedure* section. Sections 672.23 and 675.23, *Seasons*, are revised to clarify intent that the 12:00 noon times for openings and closures of fishing seasons is meant to only include seasons other than the 00:01 a.m. beginning and the 12:00 midnight end of the calendar fishing year. Otherwise, fishermen would lose 24 hours of fishing time, if the 12:00 noon time included December 31 of the preceding fishing year and January 1 of the new fishing year. In § 675.24, new paragraphs (a) and (b) referred to in the proposed rule are renumbered (d) and (e) to reflect the existence of paragraphs (a) through (c).

Classification

The Assistant Administrator for Fisheries, NOAA (Assistant Administrator) has determined that this rule is necessary for the conservation and management of the groundfish fishery off Alaska and that it is consistent with the Magnuson Act and other applicable law.

The Alaska Region, NMFS, prepared an environmental assessment for this rule. The Assistant Administrator concluded that no significant impact on the environment will occur as a result of this rule. Copies of the environmental assessment/regulatory impact review/initial regulatory flexibility analysis (EA/RIR/IRFA) may be obtained from the Regional Director at the address above.

The Under Secretary for Oceans and Atmosphere, NOAA determined that this rule is not a "major rule" requiring a regulatory impact analysis under Executive Order 12291. This determination is based on the socioeconomic impact discussed in the EA/RIR/IRFA prepared by the Alaska Region, NMFS.

The General Counsel of the Department of Commerce certified to

the Small Business Administration that this rule will not have significant economic impact on a substantial number of small entities. As a result, final regulatory flexibility analysis is not prepared. The effects that have been identified, would in general, be positive. These effects are summarized in the Classification Section of the proposed rule.

This rule does not contain a collection of information requirements subject to the Paperwork Reduction Act.

NOAA has determined that this rule will be implemented in a manner that is consistent to the maximum extent practicable with the approved coastal zone management program of the State of Alaska. This determination was submitted for review by the responsible state agencies under section 307 of the Coastal Zone Management Act. Agreement is presumed because the State agency did not respond within the allowed period.

This rule does not contain policies with federalism implications sufficient to warrant preparation of a Federalism Assessment under Executive Order 12612.

List of Subjects in 50 CFR Parts 672 and 675

Fisheries.

Dated: December 22, 1989.

Samuel W. McKeen,

Acting Assistant Administrator for Fisheries,
National Marine Fisheries Service.

For the reasons set out in the preamble, parts 672 and 675 are amended as follows:

PART 672—GROUND FISH OF THE GULF OF ALASKA

1. The authority citation for part 672 continues to read as follows:

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

2. In § 672.20, paragraph (c)(2) is redesignated as (c)(3) and a new paragraph (c)(2) is added to read as follows:

§ 672.20 General limitations.

(c) * * *

(2) *Notices of bycatch.* (i) When the Regional Director determines that the amount of the TAC of any target species or of the "other species" category that has not been caught during the fishing year is necessary for bycatch in fisheries for other groundfish species during the remainder of the fishing year, the Secretary will publish a notice in the *Federal Register* prohibiting directed fishing for that species or the "other

species" category for the remainder of the fishing year.

(ii) *Data*. All information relevant to one or more of the following factors may be considered in making determinations under paragraph (c)(2) of this section:

(A) The risk of biological harm to the groundfish species being retained;

(B) Whether a bycatch set-aside is required; and

(C) Socioeconomic impact of allocation to bycatch needs.

(iii) *Procedure*. (A) No notice issued under this section will take effect until the Secretary has filed the proposed notice for public inspection with the Office of the Federal Register, and requested public comments for a period of 30 days from the date of filing before it is made final, unless the Secretary finds for good cause that such notice and public procedure thereon is impracticable, unnecessary, or contrary to the public interest.

(B) If the Secretary decides, for good cause, that setting aside bycatch is necessary without affording a prior opportunity for public comment, written public comments on the necessity for, and extent of, the bycatch declaration will be received by the Regional Director for a period of 15 days after the effective date of the notice.

(C) During any such 15-day period, the Regional Director will make available for public inspection, during business hours, the aggregate data upon which an adjustment was based.

(D) If written comments are received during any such 15-day period which oppose or protest a notice of bycatch issued under this section, the Secretary will reconsider the necessity for the adjustment and, as soon as practicable after that reconsideration, will either:

(1) Publish in the *Federal Register* a notice of continued effectiveness of the notice of bycatch responding to comments received; or

(2) Modify or rescind the notice.

(E) Notices issued by the Secretary under paragraph (c)(2)(i) of this section will include the following information:

(1) A description of the notice;

(2) The reasons for and the determinations required under paragraph (c)(2) of this section; and

(3) The effective date and any termination date of such notice. If no termination date is specified, the notice will terminate on the last day of the fishing year.

§ 672.22 [Amended]

3. In § 672.22, remove the periods and add "; or" after paragraphs (a)(2)(i)(B) and (a)(2)(ii)(C).

4. In § 672.22, paragraphs (a)(2)(i)(C) and (a)(2)(ii)(D) are added as follows:

§ 672.22 Inseason adjustments.

(a) . . .

(2) . . .

(i) . . .

(C) The underharvest of a TAC or gear share of a TAC for any groundfish species when catch information indicates that the TAC or gear share has not been reached.

(ii) . . .

(D) Reopening of a management area or season to achieve the TAC or gear share of a TAC for any of the target species or the "other species" category.

5. Section 672.23 is revised to read as follows:

§ 672.23 Seasons.

(a) Fishing for groundfish in the regulatory areas and districts of the Gulf of Alaska is authorized from 00:01 a.m. Alaska local time, January 1, through 12:00 midnight Alaska local time, December 31, subject to other provisions of this part, except as provided in paragraphs (b) and (c) of this section.

(b) The time of all openings and closures of fishing seasons other than the beginning and end of the calendar fishing year is 12:00 noon Alaska local time.

(c) Directed fishing for sablefish with hook-and-line gear in the regulatory areas and districts of the Gulf of Alaska is authorized from April 1 through December 31, subject to the other provisions of this part.

6. In § 672.24, paragraph (a) is revised to read as follows:

§ 672.24 Gear limitations.

(a) *Marking of gear*. (1) All longline marker buoys carried aboard or used by any vessel regulated under this part shall be marked with at least one of the following:

(i) The vessel's name; and

(ii) The vessel's Federal permit number; or

(iii) The vessel's registration number.

(2) Markings shall be in characters at least four inches in height and one-half inch in width in a contrasting color visible above the water line and shall be maintained in good condition.

PART 675—GROUND FISH OF THE BERING SEA AND THE ALEUTIAN ISLANDS AREA

§ 675.20 [Amended]

7. In § 675.20, remove the periods and add "; or" after paragraphs (e)(2)(ii) and (e)(3)(iii).

8. In § 675.20, paragraphs (e)(2)(iii) and (e)(3)(iv) are added to read as follows:

§ 675.20 General limitations.

(e) . . .

(2) . . .

(iii) The underharvest of a TAC or gear share of a TAC for any groundfish species when catch information indicates that the TAC has not been reached.

(3) . . .

(iv) Reopening of a management area or season to achieve the TAC or gear share of a TAC for any of the target species or the "other species" category.

9. Section 675.23 is revised to read as follows:

§ 675.23 Seasons.

(a) Fishing for groundfish in the subareas and statistical areas of the Bering Sea and Aleutian Islands is authorized from 00:01 a.m. on January 1 through 12:00 midnight Alaska local time, December 31, subject to other provisions of this part, except as provided in paragraph (b) of this section.

(b) The time of all openings and closures of fishing seasons other than the beginning and end of the calendar fishing year is 12:00 noon Alaska local time.

10. In § 675.24, paragraph (d) and paragraph (e) are added to read as follows:

§ 675.24 Gear limitations.

(d) *Marking of gear*. All longline marker buoys carried aboard or used by vessels regulated under this part shall be marked with at least one of the following:

(1) The vessel's name; and

(2) The vessel's Federal permit number; or

(3) The vessel's registration number.

(e) Marking shall be in characters at least four inches in height and one-half inch in width in a contrasting color visible above the water line and shall be maintained in good condition.

[FR Doc. 89-30385 Filed 12-27-89; 3:15 pm]

SELLING CODE 5510-22-01

Original sponsor(s): REP. DAVIDSON, Grussendorf, Hudson, Jacko, Leman

1 IN THE HOUSE BY THE RESOURCES COMMITTEE
2 CS FOR HOUSE BILL NO. 394 (Resources)
3 IN THE LEGISLATURE OF THE STATE OF ALASKA
4 SIXTEENTH LEGISLATURE - SECOND SESSION
5 A BILL
6 For an Act entitled: "An Act relating to utilization of pollock."
7 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:
8 * Section 1. LEGISLATIVE FINDINGS AND POLICY ON UTILIZATION OF POLLOCK.
9 (a) The legislature finds
10 (1) extensive and valuable populations of pollock are available
11 for harvest in the water of and off Alaska;
12 (2) commercial markets are available for pollock processed in
13 several forms;
14 (3) one processing technique presently employed involves strip-
15 ping roe from female pollock and then discarding the carcasses of both male
16 and female pollock.
17 (b) The legislature declares that stripping roe from pollock without
18 utilizing the flesh is wasteful and does not constitute utilization of this
19 resource for the maximum benefit of the people. Therefore, it is the
20 policy of the state that this process be eliminated to the fullest extent
21 possible.
22 * Sec. 2. AS 16.10 is amended by adding a new section to article 3 to
23 read:
24 Sec. 16.10.165. UTILIZATION OF COMMERCIALY TAKEN POLLOCK. (a)
25 A person may not waste or cause to be wasted commercially taken
26 pollock.
27 (b) The Board of Fisheries may adopt regulations under the
28 Administration Procedure Act (AS 44.62) it considers necessary for
29 implementation of this section. The board may delegate its authority

1 under this section to the commissioner.

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

4 (d) In this section

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

7 (2) "person" includes a joint venture;

8 (3) "waste" means the failure to use the flesh of commer-
9 cially taken pollock for human consumption or scientific or educa-
10 tional purposes, although reduction to meal or production of food for
11 domestic animals or fish is allowed in the event the flesh is damaged
12 or otherwise unfit or unmarketable for fillets, surimi, or other
13 commercial food products for human consumption; "waste" does not
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2 (c) A person who violates this section is guilty of a class A
3 misdemeanor.

4 (d) In this section

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6 skeleton;

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

4 (d) In this section

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6 skeleton;

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