



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, Maryland 20910

JAN 5 1994

MEMORANDUM FOR: \* Distribution  
FROM: F/CM2 - *Joe P. Clem*  
SUBJECT: Review of Amendment 25 to the Fishery Management  
Plan for Groundfish of the Bering Sea and  
Aleutian Islands Area

Attached for your review and comment are the subject amendment and environmental assessment prepared by the North Pacific Fishery Management Council. The amendment proposes to eliminate the primary Pacific halibut prohibited species catch limit that, when reached, requires the closure of Bycatch Limitation Zones 1 and 2H of the Bering Sea. The action includes the authorization of the release of vessel specific observer data on bycatch of prohibited species and prohibition of discard of salmon taken as bycatch in the Bering Sea and Aleutian Islands trawl fisheries until counted by a NMFS-certified observer.

Please provide your comments, including "no comment," by February 4, 1994. If you have any questions, call Don Leedy (301) 713-2341.

#### Attachments

#### \* Distribution

F/CM	F/PR2	- Montanio
F/CM1 - Fricke, Surdi	F/HP	- Karnella
F/EN - Pallozzi	F/RE	- Flittner
GCF - Nielander	F/RE1	- Holliday
GCEL - Kuroc	CS/EC	- Wieting
Fx3 - Sissenwine	N/ORM4	- Lewsey
F/MS - Czerwonky	OGC	- Malone
F/MB	OMB	- Arbuckle
F/BP - Oliver		





AMENDMENT 25 - TEXT TO AMEND THE FMP FOR THE GROUND FISH FISHERY OF THE BERING SEA AND ALEUTIAN ISLANDS AREA

1. In Chapter 2.0, Section 2.1 entitled "History and Summary of Amendments," add the following:

Amendment 25 implemented on \_\_\_\_\_, 1994:

Eliminated the primary halibut bycatch mortality limit established for the trawl gear fisheries (3,300 mt). The overall bycatch mortality limit established for these fisheries (3,775 mt) remained unchanged.

2. In Chapter 14, entitled "Management Regime," the following sections are amended:

**Section 14.4.2.1 Bycatch Limitation Zones**

In Section 14.4.2.1, paragraph D is deleted

**Section 14.4.2.2 Prohibited Species Catch Limits**

In Section 14.4.2.2, paragraph D is amended to read as follows:

- D. Annual BSAI-wide Pacific halibut bycatch mortality limits for trawl and non-trawl gear fisheries will be established in regulations and may be amended by regulatory amendment. When initiating a regulatory amendment to change a halibut bycatch mortality limit, the Secretary, after consultation with the Council, will consider information that includes:
1. Estimated change in halibut biomass and stock condition;
  2. Potential impact on halibut stocks and fisheries;
  3. Potential impacts on groundfish fisheries;
  4. Estimated bycatch mortality during prior years;
  5. Expected halibut bycatch mortality;
  6. Methods available to reduce halibut bycatch mortality;
  7. The cost of reducing halibut bycatch mortality; and
  8. Other biological and socioeconomic factors that affect the appropriateness of a specific bycatch mortality limit in terms of FMP objectives.



**DRAFT FOR SECRETARIAL REVIEW**

**ENVIRONMENTAL ASSESSMENT  
and  
REGULATORY IMPACT REVIEW**

**OF**

**AMENDMENT 25**

**TO THE FISHERY MANAGEMENT PLAN FOR THE  
GROUND FISH FISHERY OF THE BERING SEA AND ALEUTIANS ISLANDS AREA**  
**(Elimination of the primary Pacific halibut trawl bycatch limit  
and regulatory amendments to prohibit the discard of salmon  
until counted by a NMFS-certified observer and to authorize the  
release of specified observer data on prohibited species bycatch)**

**prepared by**

**National Marine Fisheries Service  
Juneau Alaska**

**December 1993**



## Table of Contents

1.0	INTRODUCTION . . . . .	1
1.1	Description of the problem and need for action . .	2
1.1.1	Eliminate the primary halibut PSC limit . .	2
1.1.2	Mandatory retention of salmon until counted by a NMFS-certified observer . .	4
1.1.3	Release of observer data on vessel bycatch amounts of salmon and bycatch rates of other prohibited species . . . .	9
1.2	Alternatives . . . . .	9
2.0	NEPA REQUIREMENTS: ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES . . . . .	11
2.1	Environmental Impacts of the Alternatives . . . . .	12
2.1.1	Alternative 1 (Status Quo) . . . . .	13
2.1.2	Alternative 2. Eliminate the primary halibut PSC limit that closes Zones 1 and 2H . . . . .	13
2.1.3	Alternative 3 - Mandatory retention of salmon and authorized release of observer data on prohibited species bycatch. . . . .	14
2.2	Impacts on Endangered, Threatened or Candidate Species . . . . .	15
2.3	Impacts on Marine Mammals . . . . .	15
2.4	Coastal Zone Management Act . . . . .	16
2.5	Finding of No Significant Impact . . . . .	16
3.0	REGULATORY IMPACT REVIEW: SOCIAL AND ECONOMIC IMPACTS OF THE ALTERNATIVES . . . . .	16
3.1	Alternative 1: (Status quo alternative) . . . . .	18
3.2	Alternative 2. Eliminate the primary halibut PSC limit that closes Zones 1 and 2H . . . . .	18
3.3	Alternative 3 - Mandatory retention of salmon and authorized release of observer data . . . . .	19
3.4	Reporting Costs . . . . .	22
3.5	Administrative, Enforcement and Information Costs .	23
3.6	Summary of Economic Impacts: Distribution of Costs and Benefits . . . . .	23
4.0	REGULATORY FLEXIBILITY ANALYSIS . . . . .	24
4.1	Economic Impact on Small Entities . . . . .	25
5.0	SUMMARY AND CONCLUSIONS . . . . .	25
6.0	LIST OF REFERENCES . . . . .	26
7.0	AGENCIES AND INDIVIDUALS CONSULTED . . . . .	27
8.0	LIST OF PREPARERS . . . . .	27



ENVIRONMENTAL ASSESSMENT/REGULATORY IMPACT REVIEW  
FOR AMENDMENT 25 TO THE FISHERY MANAGEMENT PLAN  
FOR THE GROUND FISH FISHERY  
OF THE BERING SEA AND ALEUTIAN ISLANDS AREA

(Elimination of the primary Pacific halibut trawl bycatch limit and regulatory amendments to prohibit the discard of salmon until counted by a NMFS-certified observer and to authorize the release of specified observer data on prohibited species bycatch)

## 1.0 INTRODUCTION

The groundfish fisheries in the Exclusive Economic Zone of the Bering Sea Aleutian Island Area (BSAI) and Gulf of Alaska (GOA) are managed under the Fishery Management Plan (FMP) for the Groundfish Fishery of the BSAI and the FMP for Groundfish of the GOA. The FMPs were prepared by the North Pacific Fishery Management Council (Council) and approved by the Secretary of Commerce under the Magnuson Fishery Conservation and Management Act (Magnuson Act).

At times, amendments to the FMPs or their implementing regulations are necessary to resolve problems pertaining to management of the groundfish fisheries. The structure of the FMPs allows certain measures to be changed by regulatory amendments without amending the FMPs themselves. Actions taken to amend the FMPs or their implementing regulations must meet the requirements of Federal laws and regulations. Among the most important of these are the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), Executive Order (E.O.) 12866, and the Regulatory Flexibility Act (RFA).

NEPA, E.O. 12866, and the RFA require a description of the purpose and need for the proposed action as well as a description of alternative actions which may address the problem. This information is included in Section 1 of this document. Section 2 contains information on the biological and environmental impacts of the alternatives as required by NEPA. Impacts on endangered species and marine mammals also are addressed in this section. Section 3 contains a Regulatory Impact Review (RIR), which addresses the requirements of both E.O. 12866 and the RFA that economic impacts of the alternatives be considered.

This Environmental Assessment/Regulatory Impact Review (EA/RIR) addresses a proposed amendment to the FMP for the Groundfish Fishery of the BSAI that would eliminate the primary Pacific halibut prohibited species catch (PSC) mortality limit that, when reached, closes Bycatch Limitation Zones 1 and 2H of the Bering



Sea. The overall trawl halibut PSC mortality limit (3,775 metric tons) would remain unchanged. The analysis also addresses two proposed regulatory amendments that would (1) prohibit the discard of salmon taken as bycatch in the BSAI groundfish trawl fisheries until each salmon has been counted by a NMFS-certified observer, and (2) authorize the release of observer data on prohibited species bycatch experienced by individual vessels participating in the Alaska groundfish fisheries.

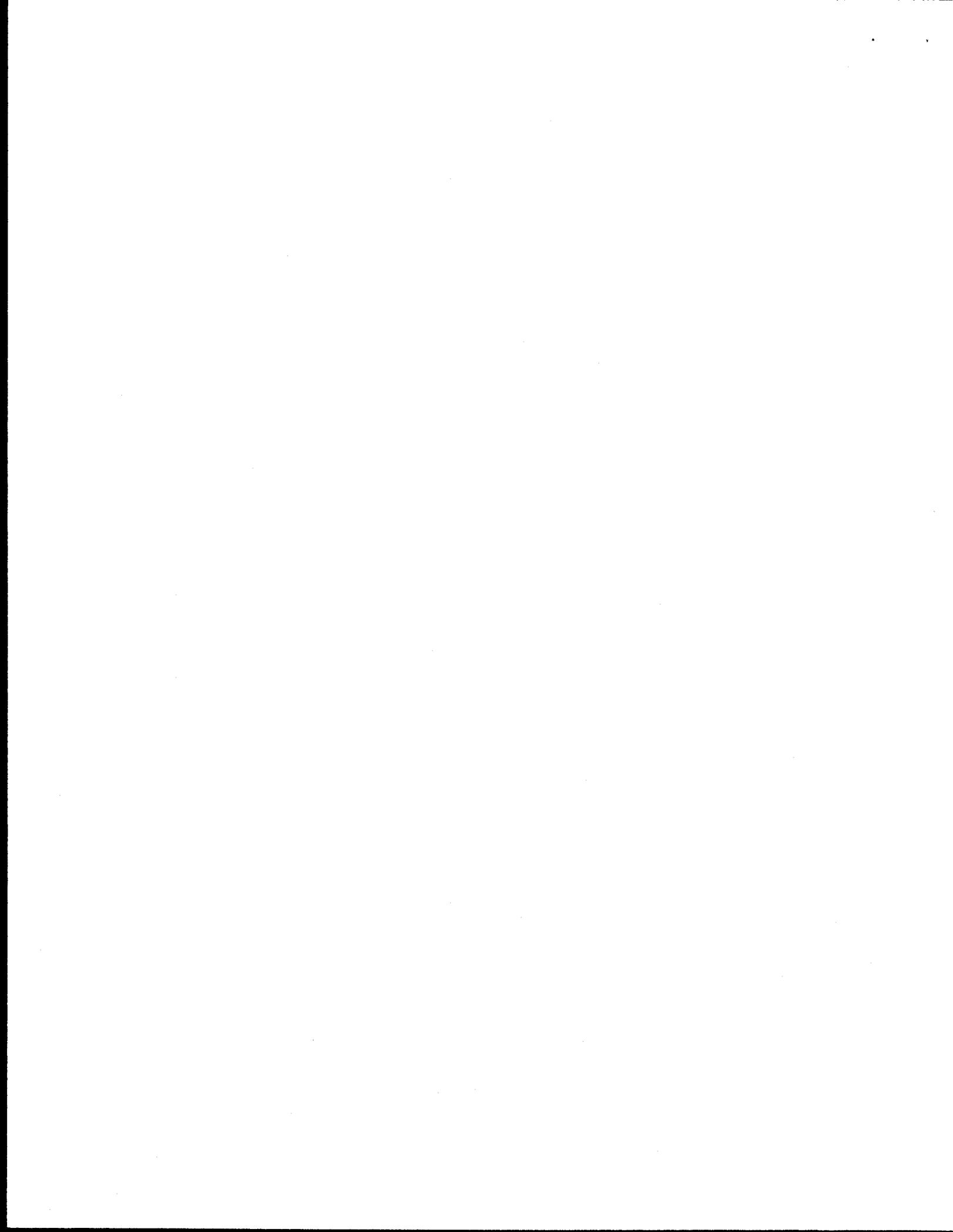
#### 1.1 Description of the problem and need for action

The Alaska groundfish fisheries result in incidental fishing mortality of non-groundfish species that are fully utilized in other fisheries. These species include Pacific halibut, salmon, king crab, Tanner crab, and Pacific herring. Retention of these species by fishermen participating in the Alaska groundfish fisheries is prohibited and halibut, crab, salmon, and herring must be returned to the sea as soon as possible with a minimum of injury.

A conflict arises when the bycatch of halibut, salmon, crab, or herring in the groundfish fisheries measurably impacts or is perceived to impact the availability of these species to other user groups. To respond to this conflict, numerous regulatory measures have been implemented to manage the bycatch of prohibited species in the groundfish fisheries. The proposed actions considered in this EA/RIR reflect a continued effort by management agencies to refine existing bycatch management measures implemented for the groundfish fisheries and collect additional information on which to base future management measures. A description of the specific problem leading to each of the proposed actions follows.

##### 1.1.1 Eliminate the primary halibut PSC limit

A 4,400 metric ton (mt) primary halibut PSC limit was established for specified BSAI trawl fisheries under Amendment 12a to the FMP for the Groundfish Fishery of the BSAI (54 FR 32642, August 9, 1989). When the primary halibut PSC limit was reached, Bycatch Limitation Zones 1 and 2H were closed to directed fishing for specified groundfish species. The intent of this closure was to reduce halibut bycatch rates experienced by the trawl fisheries without prohibiting the groundfish trawl fisheries access to the entire BSAI groundfish resource. When the secondary halibut bycatch limit established under Amendment 12a (5,333 mt) was reached, the entire BSAI was closed to directed fishing for specified groundfish species. The justification for and intent of the primary halibut PSC limit was discussed in the preamble to final rule implementing Amendment 12a. Amendment 12a expired December 31, 1990, and was superseded by Amendment 16 to the FMP.



Amendment 16 and its implementing regulations (56 FR 2700, January 24, 1991) maintained the primary and secondary halibut PSC limits at 4,400 mt and 5,333 mt, respectively. Amendment 19 to the FMP maintained the primary halibut PSC limit at 4,400 mt, but reduced the secondary limit to 5,033 mt. This adjustment was effective only for the 1992 fishing year (57 FR 43926, September 23, 1992).

Under Amendment 19, the reduced difference between the primary and secondary halibut PSC limits frustrated NMFS's ability to monitor the primary halibut PSC limit in a manner to allow closures before the secondary limit was reached. As a result, trawl closures ensuing from halibut bycatch restrictions increasingly were implemented under the secondary limit rather than the primary limit. This situation continues under Amendment 21 to the FMP, which superseded Amendment 19 and converted the primary and secondary halibut PSC limits established for trawl gear fisheries from catch limits to mortality limits (3,300 mt mortality and 3,775 mt mortality, respectively) (58 FR 14524, March 18, 1993).

Questions have been raised regarding the effectiveness of the primary PSC mortality limit to reduce halibut bycatch rates have been raised because of two issues. First, the small difference between the primary and secondary limits constrains NMFS's ability to implement fishery closures under the primary limit before the secondary limit is reached. Second, observer data on halibut bycatch rates does not indicate that closure of Bycatch Limitation Zones 1 and 2H under the primary limit necessarily reduces halibut bycatch rates to allow for more groundfish to be harvested before the secondary limit is reached. To the contrary, closure of Zones 1 and 2H can increase bycatch rates by forcing fisheries to move to areas with lower groundfish catch per unit of effort and higher halibut bycatch rates. Once the secondary limit is reached, the entire BSAI is closed to directed fishing for specified groundfish species (50 CFR 675.21(c)(1)(iv)).

To respond to these concerns, NMFS prepared a draft analysis for a proposed FMP amendment (Amendment 25) to eliminate the primary halibut PSC limit. The draft analysis was reviewed by the Council and its Advisory Panel (AP) and Scientific and Statistical Committee (SSC) during the Council's September 1992 meeting and adopted for public review.<sup>1</sup> At its December 1992

---

<sup>1</sup> The draft analysis for Amendment 25 also included an analysis of prohibited species bycatch management measures that would authorize apportionment of PSC limits to Community Development Plan (CDP) recipients as separate bycatch allowances. Although the Council adopted a preferred alternative at its December 1992 meeting, implementation concerns by NMFS has



meeting, the Council considered the testimony and recommendations of its AP, SSC, fishing industry representatives and the general public on the proposed action to eliminate the primary halibut PSC mortality limit. The Council recommended elimination of the primary trawl halibut PSC limit under Amendment 25 to the FMP and requested NMFS to prepare a proposed rule to implement this action.

1.1.2 Mandatory retention of salmon until counted by a NMFS-certified observer

The BSAI groundfish fisheries result in incidental fishing mortality of Pacific salmon. These fisheries primarily are conducted using trawl, pots, and hook-and-line gear. Trawl gear operations account for most of the groundfish catch, harvesting between 95 percent and 93 percent of the BSAI groundfish catch during 1991, 1992, and 1993, respectively. Tables 1-3 summarize bycatch amounts of chinook salmon and other salmon species combined<sup>2</sup> associated with the 1991-1993 BSAI groundfish fisheries. Trawl fisheries typically account for more than 99 percent of the salmon bycatch in the groundfish fisheries. During 1991 and 1992, chinook salmon dominated salmon bycatch and generally was the species of greatest interest and concern. In 1993, the bycatch of chum salmon<sup>3</sup> increased dramatically. This increase has caused significant concern about the effect of chum salmon bycatch on Western Alaska and Canadian stocks and a demand for more information on salmon bycatch that could be used to develop future management actions to control salmon bycatch in the groundfish trawl fisheries.

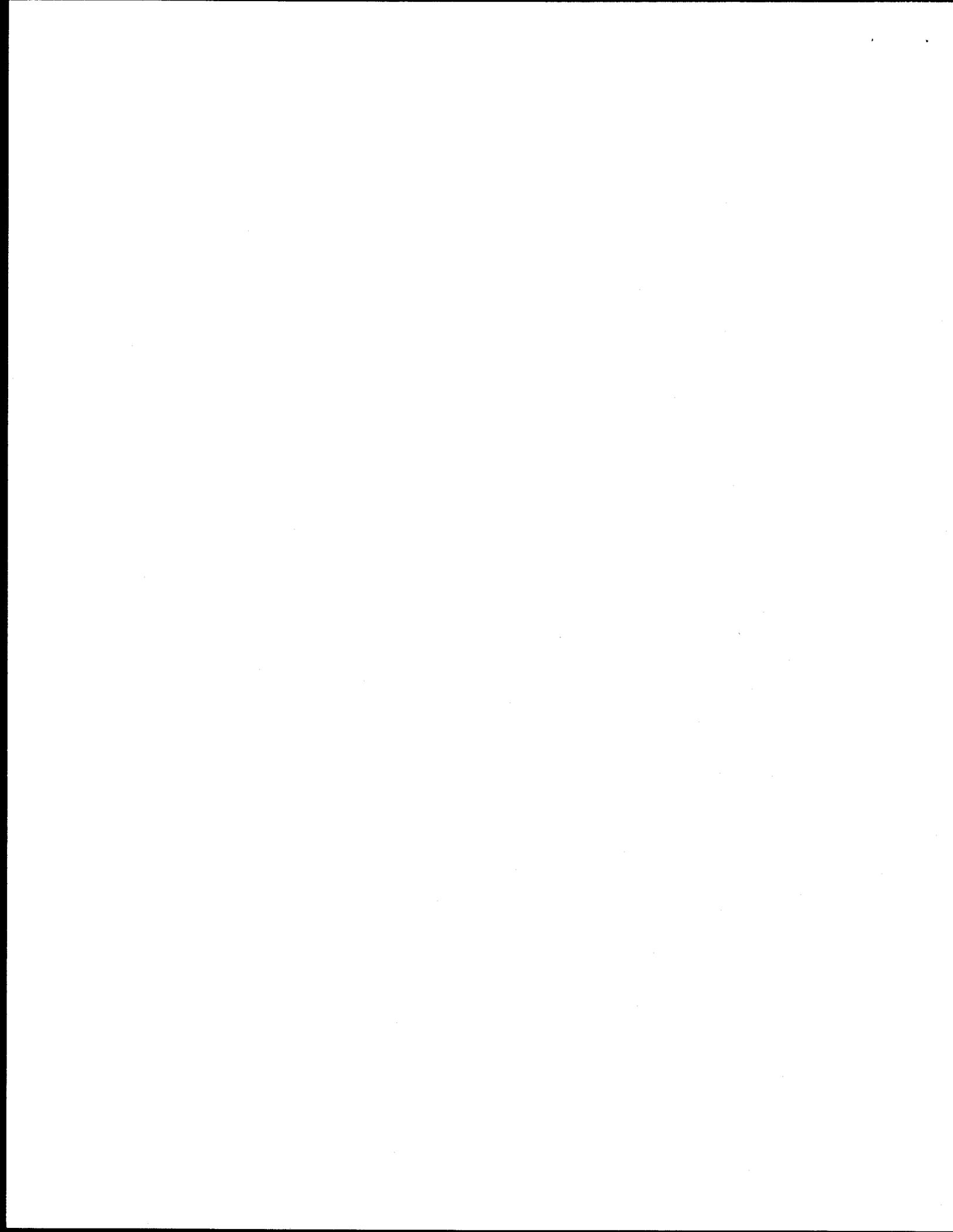
The salmon discard mortality rate experienced in the groundfish fisheries is assumed to be 100 percent. The incidental salmon fishing mortality experienced in the groundfish fisheries is one of several competing uses of the fully utilized salmon resource. Salmon also are used as catch and bycatch in directed commercial, subsistence, and sport salmon fisheries and as bycatch in other non-salmon and non-groundfish fisheries. Salmon used as bycatch in the groundfish fisheries and in other fisheries can exacerbate

---

delayed submittal of the Council's proposed action for CDP bycatch management measures to the Secretary of Commerce for review and approval.

<sup>2</sup> Estimates of groundfish catch are based on blended data from the NMFS observer program and industry reported catch. Estimates of salmon bycatch amounts are based on estimated groundfish catch and observer data on salmon bycatch rates from sampled catch.

<sup>3</sup> Chum salmon comprise almost all of the 'other salmon' bycatch experienced in the groundfish trawl fisheries



the management problem associated with the allocation of salmon among escapement goals set by Alaska State management policy and the terminal salmon fisheries. The groundfish fisheries may result in reduced escapement or harvest in the salmon fisheries, thereby imposing a cost on other salmon users.

Table 1. 1991 groundfish catch in the BSAI groundfish fisheries (metric tons) and associated bycatch of chinook salmon and other salmon (numbers of fish), based on NMFS blend estimates of groundfish catch and observed salmon bycatch rates.

<b>BSAI TARGET FISHERY</b>	<b>GROUND FISH</b>	<b>CHINOOK SAL</b>	<b>OTHER SAL</b>
Trawl Fisheries			
Atka Mackerel	30,459	152	20
Bottom pollock	381,142	5,596	11,253
Pacific cod	154,879	7,410	66
Flatfish	158,864	585	1,114
Rockfish	10,069	816	7
Other species	76	2	1
Midwater pollock	1,223,995	27,782	22,123
Rocksole	79,715	869	1,040
Sablefish	551	1	1
Greenland turbot	8,196	39	8
Arrowtooth	2,434	2	89
Total hook-and-line	97,787	55	61
Total pot gear	6,944	0	0
<b>TOTAL 1991 BSAI</b>	<b>2,155,112</b>	<b>43,311</b>	<b>35,785</b>



Table 2. 1992 groundfish catch in the BSAI groundfish fisheries (metric tons) and associated bycatch of chinook salmon and other salmon (numbers of fish), based on NMFS blend estimates of groundfish catch and observed salmon bycatch rates.

<b>BSAI TARGET FISHERY</b>	<b>GROUNDFISH</b>	<b>CHINOOK SAL</b>	<b>OTHER SAL</b>
Trawl Fisheries			
Atka Mackerel	52,460	35	8
Bottom pollock	679,063	15,994	3,747
Pacific cod	81,042	4,942	33
Rockfish	19,328	1,169	5
Midwater pollock	764,290	19,906	35,860
Rocksole	55,448	37	0
Sablefish	31	0	0
Other flatfish	7,339	65	0
Yellowfin sole	198,533	198	1,017
Other	888	5	0
Total Hook-and-line	123,077	50	117
Total Pot gear	14,439	0	0
<b>TOTAL 1992 BSAI</b>	<b>1,995,938</b>	<b>42,400</b>	<b>40,788</b>



Table 3. 1993 groundfish catch in the BSAI groundfish fisheries (metric tons) and associated bycatch of chinook salmon and other salmon (numbers of fish) through mid-October 1993, based on NMFS blend estimates of groundfish catch and observed salmon bycatch rates.

<b>BSAI TARGET FISHERY</b>	<b>GROUNDFISH</b>	<b>CHINOOK SAL</b>	<b>OTHER SAL</b>
Trawl Fisheries			
Atka Mackerel	62,953	52	175
Bottom pollock	106,156	3,490	1,977
Pacific cod	99,835	6,157	90
Rockfish	23,298	1,112	0
Midwater pollock	1,194,273	29,645	238,825
Rocksole	83,025	24	467
Sablefish	0	0	0
Other flatfish	16,370	76	106
Yellowfin sole	98,022	414	209
Other	388	0	0
Total Hook-and-line	80,391	50	7
Total Pot gear	2,110	0	0
Total Other gear	195	0	0
<b>TOTAL 1993 BSAI</b>	<b>1,767,016</b>	<b>41,020</b>	<b>241,856</b>



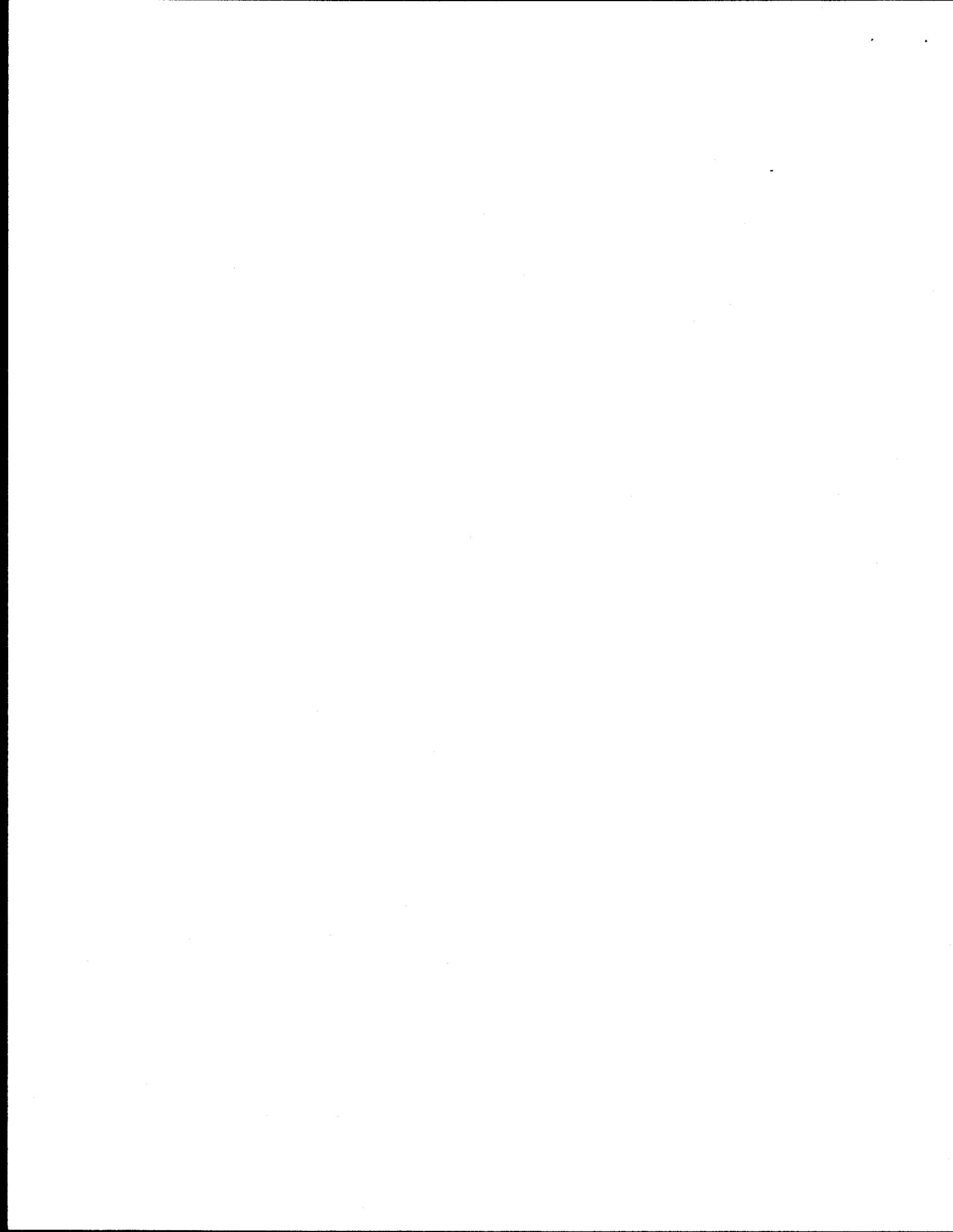
In general, no information exists to indicate that the current level of salmon bycatch in the Alaska trawl fisheries presents critical conservation issues; however, low salmon returns for some Western Alaska stocks indicate that the potential exists for conservation concerns. Although a mixed stock bycatch of salmon in the trawl fisheries could disproportionately affect jeopardized stocks, insufficient information exists on the ocean distribution of individual stocks to specifically manage for a desired escapement goal through the establishment of a salmon bycatch limit for the BSAI trawl fleet. The potential effect of chinook salmon bycatch on Western Alaska chinook runs is discussed in the EA/RIR/IRFA prepared for Amendment 21b.<sup>4</sup> In summary, the approximate impact of chinook salmon bycatch on the returns to the Nushagak and Yukon Rivers is used as a rough approximation of the impact of chinook salmon bycatch on Western Alaska systems in general, which contribute to most of the chinook salmon bycatch in the BSAI trawl fisheries. If all chinook salmon bycatch in the BSAI trawl fisheries ceased, only a very small percentage increase would occur in chinook salmon returns to any Western Alaska system. Although considerable annual variability occurs, the average percentage by which Yukon River chinook salmon abundance might have increased was approximately 2 percent, and the average percentage addition to the Nushagak River was approximately 4 percent.

Similar information on the potential impact of chum salmon bycatch on Western Alaska and Canadian stocks is not available. However, whether the impact costs associated with the current or anticipated level of salmon bycatch in the groundfish fisheries include foregone harvest opportunities in the commercial salmon fisheries depends on status of individual salmon stocks and whether bycatch savings would contribute toward meeting escapement goals or enhancing subsistence, sport or commercial fisheries. A fuller discussion of the potential effects of incidental chinook salmon bycatch mortality on Western Alaska chinook salmon stocks is presented in the draft EA/RIR/IRFA prepared for Amendment 21b to the BSAI FMP.

Whether or not the current levels of bycatch present a conservation issue, this level of bycatch continues to be a sensitive issue among fishermen and others. Subsistence, commercial, and sport fishing advocates have lobbied the Council

---

<sup>4</sup> Reference is made to the public review draft of the EA/RIR/IRFA prepared for Amendment 21b (salmon bycatch management measures) to the FMP for the Groundfish Fishery of the BSAI, dated March 18, 1993. A copy of the analysis is available from the Council upon request. The Council has not yet taken final action on salmon bycatch management measures considered in the analysis, however, it is scheduled to consider similar management measures at its April 1994 meeting.



to adopt management measures to limit salmon bycatch in the Alaska groundfish trawl fisheries, especially those conducted in the BSAI.

At this time, insufficient information exists on which to base practical management measures to address the salmon bycatch problem. At its September 1993 meeting, the Council requested NMFS to submit a proposed rule for review and approval that would prohibit the discard of salmon taken in the BSAI groundfish trawl fisheries until after a NMFS-certified observer has counted each fish and collected any scientific data or biological samples that the observer had been requested by NMFS to obtain. Regulations to require retention of all salmon taken in groundfish trawl operations until an observer has counted each fish would provide the opportunity to collect better data on salmon bycatch. These data could be used to assess the quality of bycatch rate estimates derived from existing observer sampling procedures and provide additional information on which to assess the magnitude of salmon bycatch in the Alaska trawl fisheries. Additional information on salmon bycatch also would support initiatives by management agencies and the industry to more fully explore factors that may be correlated with salmon bycatch and identify changes in fishing operations that could reduce salmon bycatch rates.

#### 1.1.3 Release of observer data on vessel bycatch amounts of salmon and bycatch rates of other prohibited species

At its September 1993 meeting, the Council requested NMFS to prepare a proposed rule that would authorize the release of weekly observer data collected on the name and Federal permit number of each vessel participating a directed fishery for Alaska groundfish, the number of chinook salmon and other salmon species taken by each vessel, and the observed bycatch rates of Pacific halibut, Pacific herring, king crab, and Tanner crab taken by vessels participating in the groundfish fisheries. Members of the groundfish industry have requested that this information be disclosed to support independent industry initiatives to address the bycatch problem.

To further support industry initiatives to reduce prohibited species bycatch rates in the groundfish fisheries, members of the groundfish trawl industry submitted a separate request to NMFS for the release of additional observer data on prohibited species bycatch in the groundfish trawl fisheries. The disclosure of this data would provide inseason guidance on potential bycatch problems that individual vessel owners could take action to avoid.

#### 1.2 Alternatives

Three alternatives were considered by the Council. The Council



also has requested NMFS to develop a separate analysis of a proposed management measure that would require the retention and processing of salmon taken in the BSAI groundfish trawl fisheries for purposes of donation to nonprofit foodbank organizations. NMFS is scheduled to present a draft analysis to the Council at its April 1994 meeting. Of the three alternatives presented below, Alternatives 2 and 3 are complementary and could be implemented simultaneously.

Alternative 1: No action (status quo alternative). The primary halibut PSC limit would be maintained and regulatory changes would not be implemented to authorize (1) the retention of salmon taken in BSAI trawl operations to collect additional observer data on salmon bycatch and (2) the release of observer data on vessel specific bycatch of prohibited species.

Alternative 2 (preferred): Eliminate the primary halibut PSC limit that, when reached, closes Bycatch Limitation Zones 1 and 2H. The overall halibut mortality limit (3,775 mt) that closes the entire BSAI would be retained.

Alternative 3 (preferred): Amend existing regulations to:

- (1) Prohibit the discard of salmon taken in the BSAI groundfish trawl fisheries until after a NMFS-certified observer has counted each fish and collected any scientific data or biological samples that the observer had been requested by NMFS to obtain;
- (2) Authorize the release of weekly observer data collected on the name and Federal permit number of each vessel participating a directed fishery for Alaska groundfish, the number of chinook salmon and other salmon species taken by each vessel, and the observed bycatch rates of Pacific halibut, Pacific herring, king crab, or Tanner crab, taken by vessels participating in the BSAI or Gulf of Alaska (GOA) groundfish fisheries; and
- (3) Authorize the release of the following observer data for hauls observed onboard vessels participating in the groundfish trawl fisheries.

Date

Time of day gear is deployed

Latitude and longitude at beginning of haul

Bottom depth

Fishing depth of trawl

Rate chinook salmon (number of salmon/mt groundfish)

Rate other salmon (number of salmon/mt groundfish)

Rate Pacific halibut (kilograms halibut/mt groundfish)

Rate Pacific herring (kg herring/mt groundfish)

Rate king crab (number of crab/mt groundfish)



Rate Bairdi Tanner crab (number of crab/mt groundfish)  
Sea surface temperature (where available)  
Sea temperature at fishing depth of trawl (where available)

Regulations implementing Alternative 3 would require operators of vessels carrying observers and whose fishing operation allows for sorting of groundfish catch to retain all salmon bycatch in a separate bin or other location that allows the observer easy access to each salmon for observation and collection of scientific data or biological samples. Operators of vessels without observers onboard or that deliver unsorted catch to processors would be required to retain all salmon taken by the vessel in good condition for delivery to the processor receiving the vessels' groundfish catch.

Processors receiving groundfish from trawl vessels participating in a directed fishery for BSAI groundfish would be required to retain all salmon delivered by each vessel during a weekly reporting period in separate bins marked with the vessel's name and Alaska Department of Fish and Game (ADF&G) fish ticket number until a NMFS-certified observer has counted each salmon and collected any scientific data or biological samples from the salmon delivered to the processor by that vessel. Processors without observer coverage would be required to store all salmon until a NMFS-certified observer is available to count each fish. Salmon must be stored at a location that allows an observer easy access to each salmon.

All salmon would be required to be returned to the sea immediately following notice by a NMFS-certified observer that salmon have been counted and the collection of any scientific data or biological samples has been completed. The discard of any salmon prior to notification by a NMFS-certified observer that salmon have been counted would constitute a violation of regulations authorized under the Magnuson Act. Such violations would be subject to enforcement action under the Magnuson Act.

Option 1 (preferred): Exempt mothership processors and shoreside processing facilities from retaining salmon delivered to them during those months that the mothership processor or shoreside processing facility is not required to obtain observer coverage under 50 CFR 672.27 and 675.25. Under existing regulations, motherships or shoreside facilities that receive less than 500 mt of groundfish during a month are not required to obtain observer coverage for that month.

## **2.0 NEPA REQUIREMENTS: ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES**



An environmental impact statement must be prepared for major Federal actions significantly affecting the quality of the human environment. Determination of significance requires consideration of context and intensity, including (1) the degree to which public health or safety is affected, (2) unique characteristics of the geographic area concerned, (3) the degree to which the effects are likely to be highly controversial, (4) the degree to which effects are highly uncertain or involve unique or unknown risks, (5) the degree to which the action establishes a precedent for future actions with significant effects or represents a decision in principle about a future consideration, (6) whether the action is individually insignificant but likely to result in cumulatively significant impacts, (7) the degree to which the action adversely affects entities listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural or historic resources, (8) the degree to which threatened or endangered species, or their habitat, are adversely affected, and (9) whether a violation of Federal, State or local law for environmental protection is threatened. In addition, consistent with NOAA Administrative Order 216-6, determination of significance also requires evaluation whether any fishery management plan or amendment may reasonably be expected to (1) jeopardize the long-term productive capability of any stocks that may be affected by the action, (2) allow substantial damage to the ocean and coastal habitats, (3) have a substantial adverse impact on public health or safety, (4) adversely affect an endangered or threatened species or a marine mammal population, or (5) result in cumulative adverse effects that could have a substantial effect on the target resource species or on any related stocks that may be affected by the action.

## 2.1 Environmental Impacts of the Alternatives

The environmental impacts generally associated with fishery management actions are effects resulting from (1) harvest of fish stocks which may result in changes in food availability to predators, changes in the population structure of target fish stocks, and changes in community structure; (2) changes in the physical and biological structure of the benthic environment as a result of fishing practices (e.g., effects of trawling and fish processing discards); and (3) entanglement/entrapment of non-target organisms in active or inactive fishing gear. A summary of the effects of the 1993 groundfish total allowable catch (TAC) amounts on the biological environment and associated impacts on marine mammals, seabirds, and other threatened or endangered species are discussed in the final environmental assessment for the 1993 groundfish TAC specifications (NMFS, 1993).



Salmon and other prohibited species bycatch rates could be reduced under Alternative 3 to the extent that the disclosure of vessel specific bycatch or bycatch rates of prohibited species provides an incentive to vessel operators to take action to avoid excessively high bycatch rates. If such reductions occur, a greater portion of the groundfish TACs could be taken before halibut or crab bycatch restrictions close fisheries. Any additional groundfish harvest amounts would not be expected to effect the biological or physical environment in a manner not already considered in the final environmental assessment prepared for the 1993 groundfish TAC specifications. Additional information collected under Alternative 3 also could be used to develop future management measures to limit or reduce salmon bycatch amounts in the groundfish trawl fisheries.

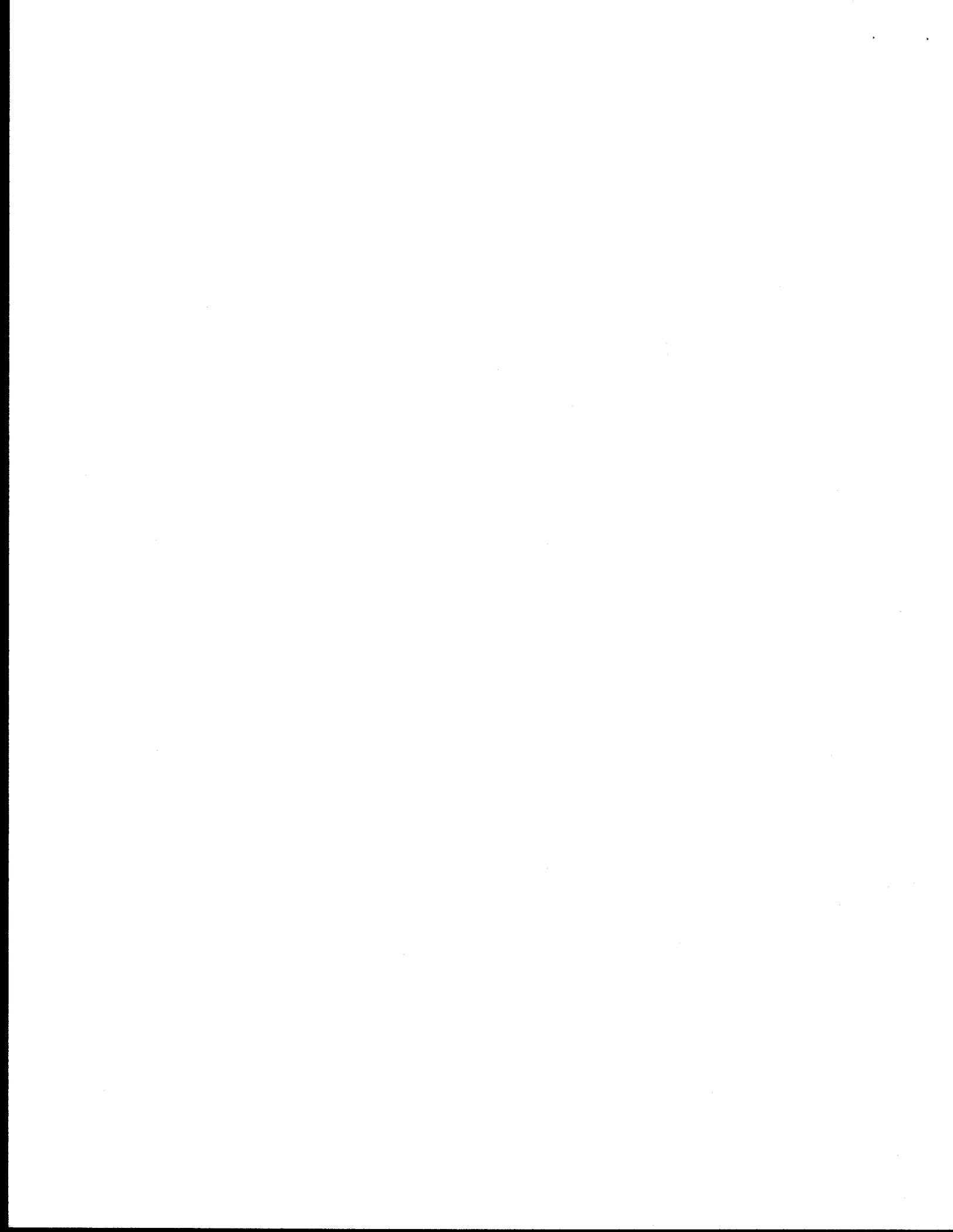
#### 2.1.1 Alternative 1 (Status Quo)

Under this alternative, additional information would not be collected on salmon bycatch to support the development of future management measures to address the salmon bycatch problem. Release of observer data on vessel bycatch of prohibited species would not be authorized and the groundfish industry would continue to operate without the benefit of timely information that could be used to take action to reduce prohibited species bycatch rates in the Alaska groundfish fisheries.

#### 2.1.2 Alternative 2. Eliminate the primary halibut PSC limit that closes Zones 1 and 2H

This option would eliminate the primary halibut PSC limit that closes Zones 1 and 2H, but retain the overall halibut PSC limit that closes the entire BSAI. This option was suggested by NMFS for several reasons. First, the original intent of the primary closure is not being met. The primary closure was intended to provide each halibut PSC allowance fishery with a chance to decrease its halibut bycatch rate before the secondary closure of the entire BSAI. The intent was not met because the primary closure could increase bycatch rates by forcing a fishery to move to areas with higher bycatch rates. Second, Amendments 19 and 21 decreased the secondary limit but not the primary limit; therefore, the difference between the two limits and the potential usefulness of the primary limit decreased.

Eliminating the primary halibut limits would delay the closure of Zones 1 and 2H whenever the primary halibut PSC allowance for a fishery would have been taken before the crab PSC allowances for that fishery would have closed Zones 1 and 2. Such a delay would be expected to increase groundfish catch in Zones 1 and 2H, the results of which would include increased bycatch in Zones 1 and 2H and probably decreased fishing effort and bycatch in other areas. Although the directions of the net effects on bycatch



probably would differ by PSC species and fishery, any increases would be limited by the other PSC limits which would remain unchanged. Total red king crab bycatch in Zone 1 would continue to be limited by the Zone 1 red king crab and bairdi Tanner crab (bairdi) PSC limits. Similarly, total bairdi bycatch in Zone 1 would be limited by the Zone 1 bairdi and red king crab PSC limits. Total bairdi bycatch in Zone 2 would be limited by the bairdi PSC limit for that area. Finally, total halibut bycatch in the trawl fisheries, excluding perhaps unexpectedly high bycatch in the Atka mackerel and mid-water pollock fisheries, would continue to be limited by the 3,775 mt halibut bycatch mortality limit that was established by Amendment 21.

A bycatch simulation model used to assess the relative bycatch effects resulting from the implementation of Alternative 2 suggests that the elimination of the primary halibut closures could increase the bycatch of halibut, bairdi Tanner crab, and chinook salmon, although none of the estimated changes approach 1 percent. The bycatch of red king crab or herring would remain unchanged. These results occur, in part, because the model does not provide good estimates of the magnitude of changes when constraints are relaxed and closures would be postponed. The reason for this is that the distribution of catch is based on 1990-92 data and during this period primary closures occurred.

2.1.3        Alternative 3 - Mandatory retention of salmon and authorized release of observer data on prohibited species bycatch.

NMFS is concerned that current procedures used to extrapolate observed salmon bycatch rates to unobserved catch for purposes of calculating total salmon bycatch amounts do not yield good estimates. The primary difficulty is that the sample sizes of observed hauls are not adequate. NMFS statisticians believe observers would need to sample between 1 and 2 mt from each sampled haul to provide sufficiently large sample sizes to support extrapolation of observed bycatch rates to unobserved catch. Sample sizes of this magnitude cannot be routinely accommodated by observers because of time, logistic, and operation constraints.

Regulations to require retention of all salmon taken in the BSAI groundfish trawl operations until an observer has counted each fish would provide the opportunity to collect better data on salmon bycatch. These data could be used to assess the quality of bycatch rate estimates derived from existing sampling procedures and provide additional information on which to assess the magnitude of salmon bycatch in the BSAI trawl fisheries. Mandatory retention of salmon until counted by an observer also would support initiatives, such as the proposed Salmon Research Foundation program, to more fully explore factors that may be correlated with salmon bycatch and identify changes in fishing



operations that could reduce salmon bycatch rates.

The authority to release observer data on vessel bycatch of prohibited species has been requested by industry members to allow fishermen to make informed decisions that could minimize bycatch rates of these species. This action could have a positive effect on prohibited species to the extent that observer data on vessel bycatch of prohibited species would provide fishermen with information that could be used to reduce prohibited species bycatch rates and amounts. The disclosure of vessel specific bycatch amounts of salmon and bycatch rates of other prohibited species also would allow the industry to identify those vessels that account for a disproportionate share of prohibited species bycatch and encourage vessel operators to take action to avoid excessive bycatch rates of these species.

## 2.2 Impacts on Endangered, Threatened, or Candidate Species

Listed and candidate species that may be present in the BSAI are discussed in detail in the EA prepared on the 1993 Total Allowable Catch Specifications for the BSAI and Gulf of Alaska (NMFS, 1993). Species that are listed, or proposed to be listed, under the Endangered Species Act that may occur in the BSAI or GOA include: the endangered fin whale (Balaenoptera physalus), sei whale (Balaenoptera borealis), humpback whale (Megaptera novaeangliae), sperm whale (Physeter catodon) and short-tailed albatross (Diomedea albatrus); the threatened Steller sea lions (Eumetopias jubatus), and Snake River fall chinook salmon (Oncorhynchus tshawytscha); and the proposed spectacled eider (Somateria fischeri).

Consultation pursuant to section 7 of the Endangered Species Act has been conducted for the overall effects of the BSAI/GOA fishery and the 1993 TACs on these listed species. None of the alternatives considered are expected to affect any proposed, candidate, or listed species in a manner not already authorized in previous consultations.

## 2.3 Impacts on Marine Mammals

Marine mammals not listed under the Endangered Species Act that may be present in the BSAI and GOA include cetaceans, [minke whale (Balaenoptera acutorostrata), killer whale (Orcinus orca), Dall's porpoise (Phocoenoides dalli), harbor porpoise (Phocoena phocoena), Pacific white-sided dolphin (Lagenorhynchus obliquidens), and the beaked whales (e.g., Berardius bairdii and Mesoplodon spp.)] as well as pinnipeds [northern fur seals (Callorhinus ursinus), and Pacific harbor seals (Phoca vitulina)] and the sea otter (Enhydra lutris). None of the alternatives considered are expected to significantly change the amount of groundfish harvested or other fishing activities in a manner that



would result in an affect on any marine mammal species.

#### 2.4 Coastal Zone Management Act

Each of the alternatives would be conducted in a manner consistent, to the maximum extent practicable, with the Alaska Coastal Management Program within the meaning of Section 30(c)(1) of the Coastal Zone Management Act of 1972 and its implementing regulations. This determination has been submitted for review by the responsible state agency under section 307 of the Coastal Zone Management Act.

#### 2.5 Finding of No Significant Impact

None of the alternatives considered are likely to significantly affect the quality of the human environment, and the preparation of an environmental impact statement for selection of Alternatives 2 and 3 as the preferred alternatives is not required by section 102(2)(C) of the National Environmental Policy Act or its implementing regulations. Neither the amount of groundfish harvested or other fishing activities would change significantly in a manner that would affect the biological or physical environment.

Dated:

---

### **3.0 REGULATORY IMPACT REVIEW: SOCIAL AND ECONOMIC IMPACTS OF THE ALTERNATIVES**

A review of the social and economic impacts of the alternatives provides information about those industry members affected by the proposed action and the economic gains or losses they are likely to experience as a result of the action. This section also addresses the requirements of both E.O. 12866 and the Regulatory Flexibility Act to provide adequate information to determine whether an action is significant under E.O. 12866 or will result in "significant" impacts on small entities under the RFA.

Executive Order 12866, "Regulatory Planning and Review", was signed on September 30, 1993, and established guidelines for promulgating new regulations and reviewing existing regulations. While the executive order covers a variety of regulatory policy considerations, the benefits and costs of regulatory actions are



a prominent concern. Section 1 of the order deals with the regulatory philosophy and principles that are to guide agency development of regulations. The regulatory philosophy stresses that, in deciding whether and how to regulate, agencies should assess all costs and benefits of all regulatory alternatives. In choosing among regulatory approaches, the philosophy is to choose those approaches that maximize net benefits to society.

The regulatory principles in E.O. 12866 emphasize careful identification of the problem to be addressed. The agency is to identify and assess alternatives to direct regulation, including economic incentives, such as user fees or marketable permits, to encourage the desired behavior. When an agency determines that a regulation is the best available method of achieving the regulatory objective, it shall design its regulations in the most cost-effective manner to achieve the regulatory objective. Each agency shall assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Each agency shall base its decisions on the best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and consequences of, the intended regulation.

NMFS requires the preparation of a Regulatory Impact Review (RIR) for all regulatory actions that either implement a new Fishery Management Plan (FMP) or significantly amend an existing plan. The RIR is part of the process of preparing and reviewing FMPs and provides a comprehensive review of the changes in net economic benefits to society associated with proposed regulatory actions. The analysis also provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problems. The purpose of the analysis is to ensure that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost-effective way. The RIR addresses many of the items in the regulatory philosophy and principles of E.O. 12866.

Executive Order 12866 requires that the Office of Management and Budget review proposed regulatory programs that are considered to be "significant". A "significant regulatory action" is one that is likely to:

- (1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;



(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

A regulatory program is "economically significant" if it is likely to result in the effects described in item (1) above. The RIR is designed to provide information to determine whether the proposed regulation is likely to be "economically significant".

A description of the purpose and need for the action and alternatives considered to address these problems were described in Sections 1.1 and 1.2. The social impacts associated with salmon bycatch and the different uses of salmon are described in the draft EA/RIR/IRFA prepared for Amendment 21b. As described above, halibut, salmon, crab, and herring are used as bycatch in the groundfish fisheries and other fisheries, and as catch in the directed subsistence, commercial, and sport fisheries.

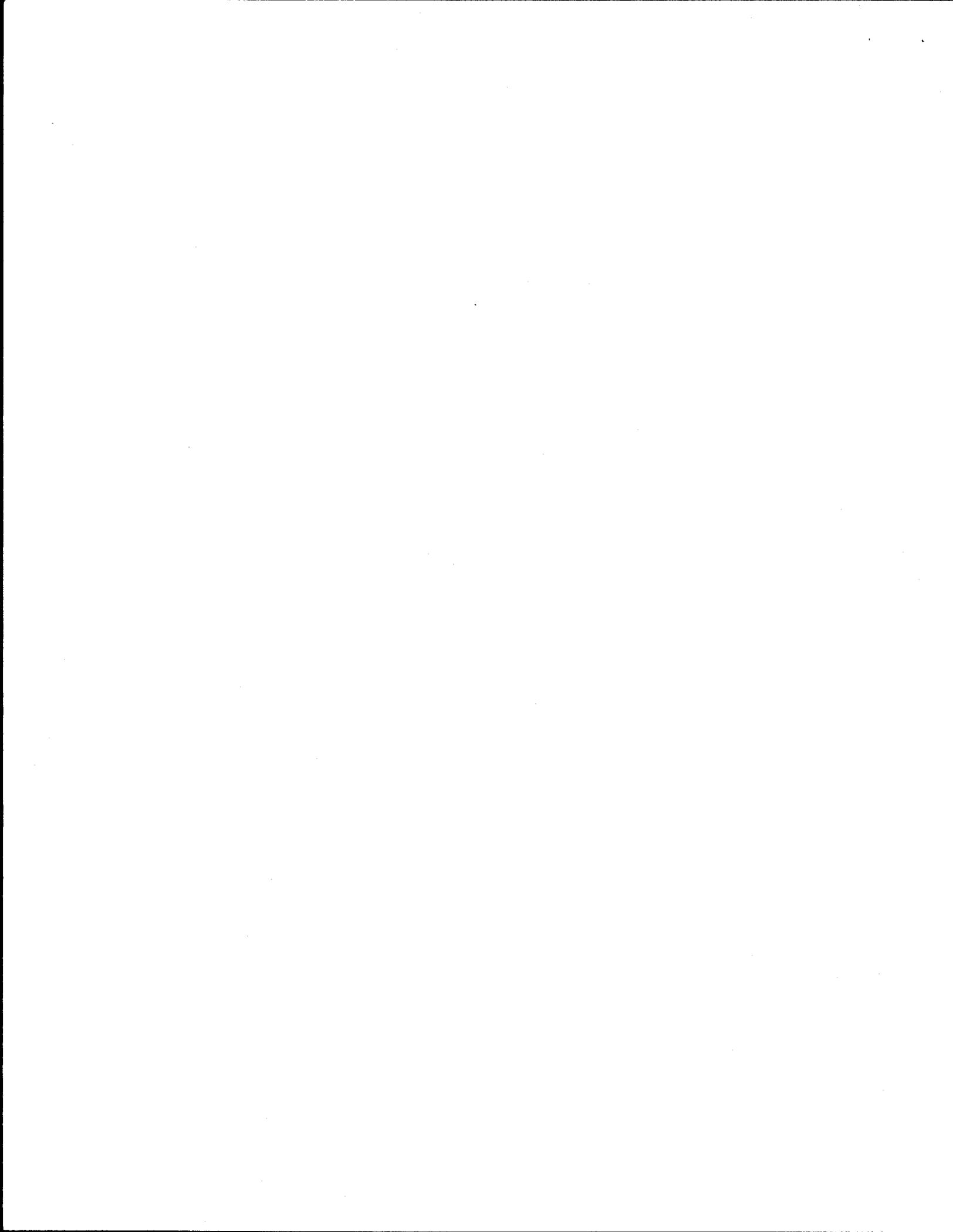
The economic impacts of these alternatives are discussed below. As previously mentioned, Alternatives 2 and 3 are complimentary management measures and could be implemented simultaneously.

### 3.1 Alternative 1: (Status quo alternative)

Under alternative 1, no action would be taken and the status quo would remain. As a result, the potential economic benefits that could occur under Alternatives 2 or 3 would not be realized. These potential benefits are separately discussed below.

### 3.2 Alternative 2. Eliminate the primary halibut PSC limit that closes Zones 1 and 2H

The groundfish fleet has indicated that the primary halibut closure has at times forced it to move to areas with lower catch per unit of effort and higher bycatch rates. To the extent that this would happen, the primary closure may impose costs without comparable benefits. However, if the closure of Zones 1 and 2H results in vessels moving to areas with lower bycatch rates, such closures can increase the amount of catch that can be taken with a given PSC allowance. This could benefit a groundfish fleet. Therefore, for a specific trawl fishery, whether the benefits of the primary closure are positive or negative will be determined in part by bycatch rates in Zones 1 and 2H compared to other areas. Because this comparison can differ among fisheries or



over time, the net benefits to groundfish fishermen of eliminating the primary closure can vary by fishery and year.

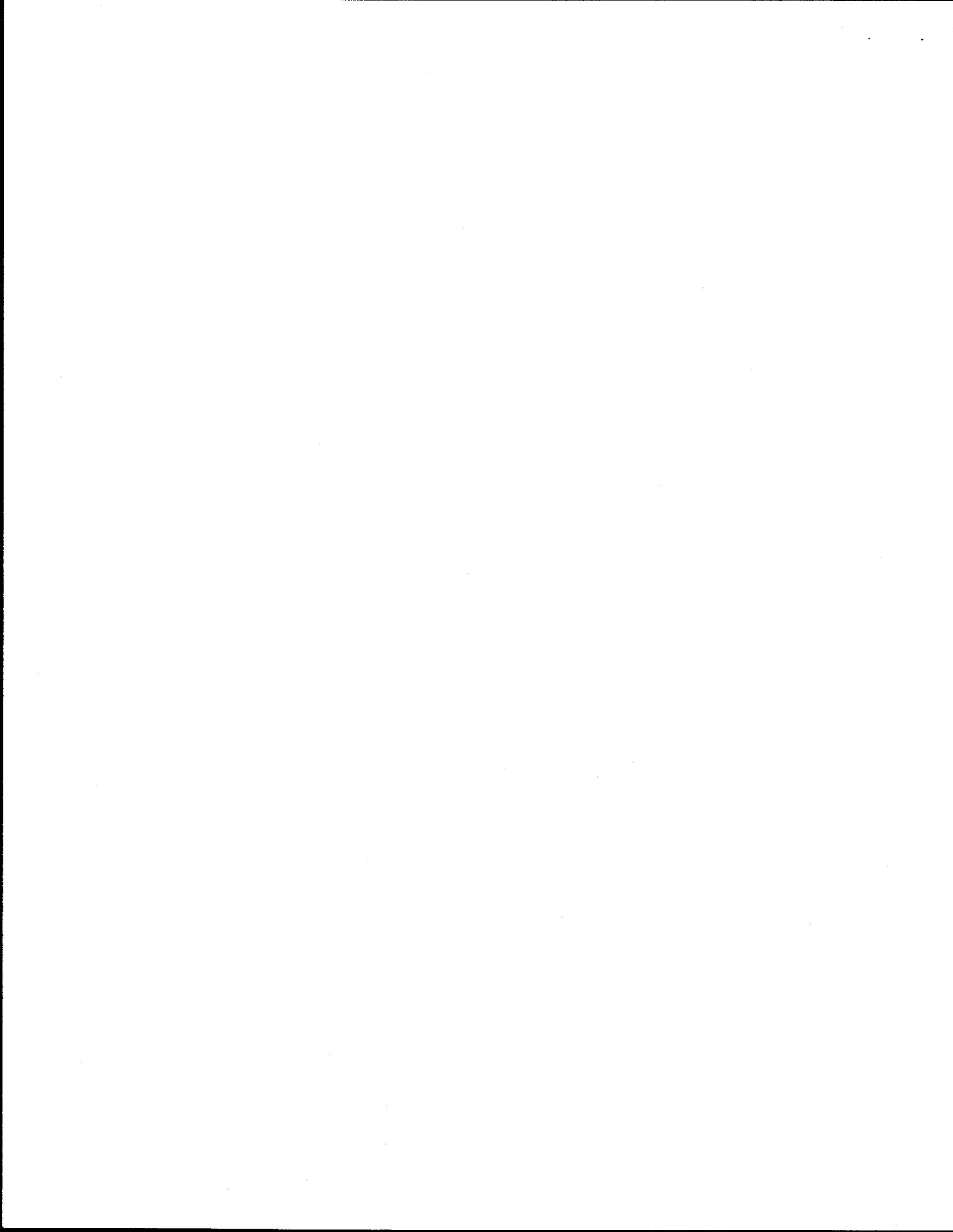
The bycatch simulation model used to assess the relative bycatch effects resulting from the implementation of Alternative 2 suggests that the elimination of the primary halibut closures could increase the value of the groundfish trawl catch net of variable harvesting and processing cost and net of bycatch impact costs. These changes are less than 1 percent.

### 3.3 Alternative 3 - Mandatory retention of salmon and authorized release of observer data

Salmon bycatch rates in the 1993 pollock and Pacific cod trawl fisheries ranged from about 0.2 salmon per mt groundfish in the midwater pollock fishery to about 0.06 salmon in the Pacific cod fishery. The bottom pollock fishery experienced a rate of about .05 salmon per mt groundfish. The salmon bycatch rates experienced in the 1992 midwater pollock fishery were lower at .07 salmon per mt ton groundfish. The 1992 bycatch rates in the bottom pollock and the Pacific cod fisheries were about the same as those experienced in 1993.

Given these relatively low salmon bycatch rates, costs to the groundfish trawl industry to retain salmon until counted by a NMFS-certified observer would not be expected to be significant. Nonetheless, some costs to the industry would result under Alternative 3 that are associated with lost fishing or production time if vessel or processor crew must sort and store salmon until an observer is available to count each fish. Bin space to store salmon may be limited and interfere with normal fishing or processing operations, particularly if the number of salmon taken as bycatch is large. Mothership and shoreside processing operations that receive catch from more than one catcher vessel would have the addition burden of separately storing salmon delivered by each vessel.

Regulations implementing the Observer Program (50 CFR 672.27 and 675.25) specify different levels of observer coverage for vessels and processors depending on either vessel length or amounts of groundfish delivered to processors. Small processing operations that have less than 100 percent observer coverage would incur additional costs because of the additional period of time that salmon must be maintained before an observer is obtained to count retained fish. Processors without observer coverage would be required to freeze salmon until such time that an observer is available to count retained fish. Some processors are never required to obtain an observer because their groundfish processing operation is so small as to never exceed 500 mt during a single month. Mandatory retention would require these processing operations to freeze salmon carcasses for unknown period of time until an observer is obtained to count the fish.



Although not quantified, the associated costs to these operations resulting from long-term storage of salmon likely are unreasonable relative to the small amounts of salmon bycatch that is likely associated with the small amounts of groundfish delivered to these processing operations. These costs would be reduced under Option 1 of Alternative 3.

Under Option 1, mothership processors and shoreside processing facilities would be exempt from retaining salmon delivered to them during those months that the mothership processor or shoreside processing facility is not required to obtain observer coverage under 50 CFR 672.27 and 675.25. Table 4 lists the number of processor months that 0 mt - 499 mt and 500 mt - 999 mt tons of BSAI groundfish were delivered. These tonnage intervals correspond to those months during which zero and 30 percent observer coverage is required, respectively.

Exempting processors from retaining salmon during those months that observers are not obtained (i.e., the processor receives less than 500 mt of groundfish) would relieve a disproportionate burden on small processing operations that likely do not have the freezer capacity to store retained salmon for an indefinite period of time.

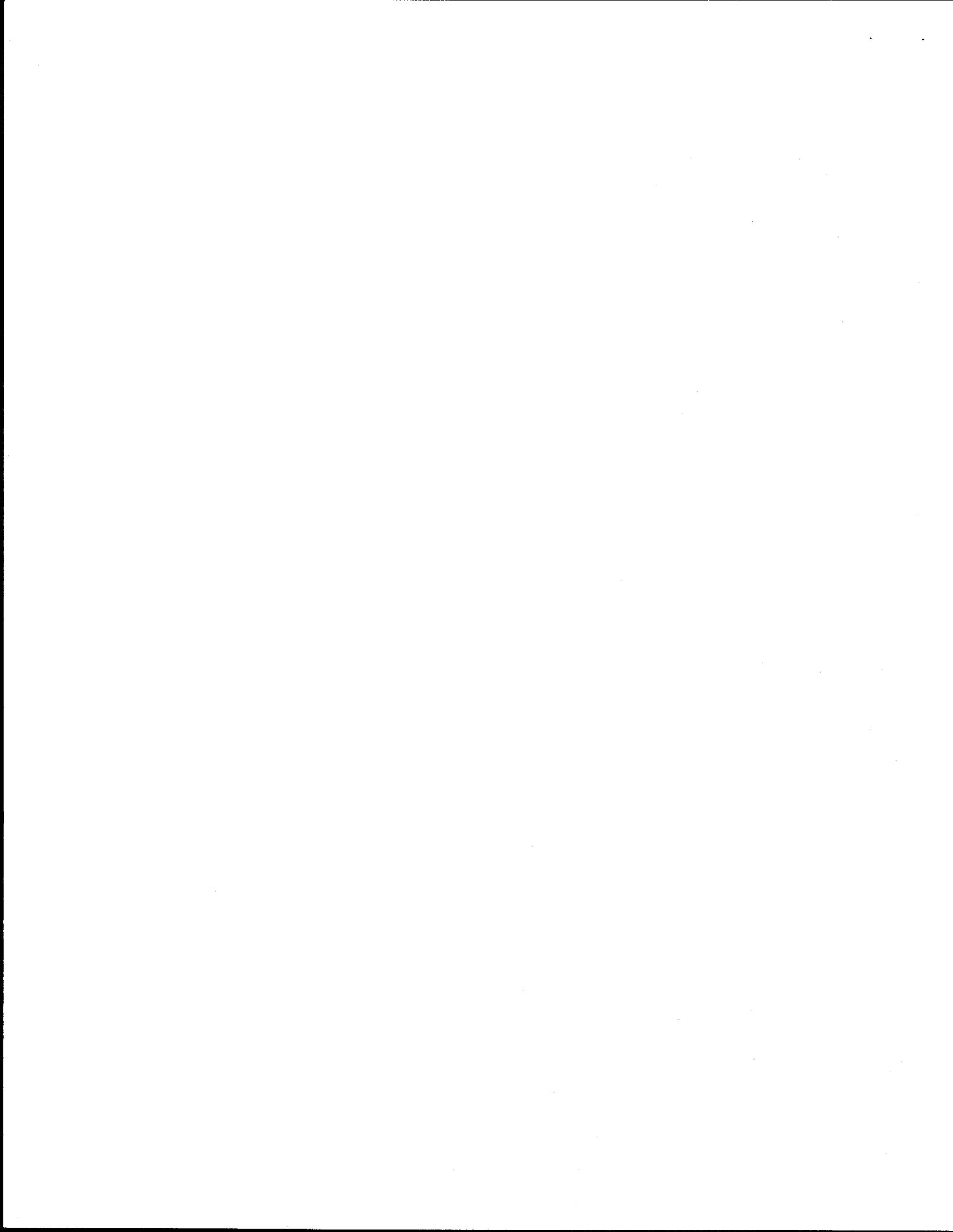
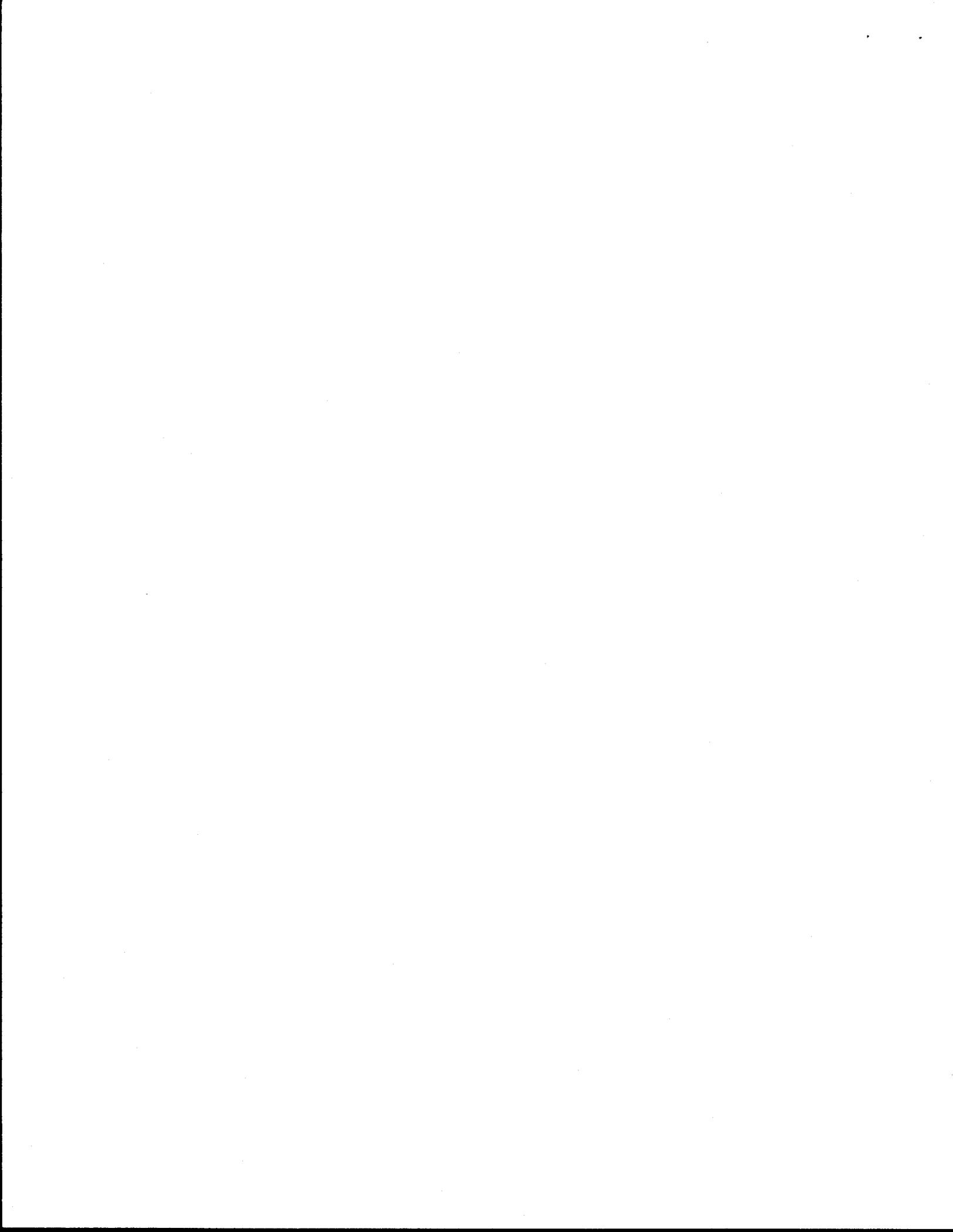


Table 4. Mothership and shoreside processor months during 1992 and 1993 (through mid October '93) in which zero percent and 30 percent observer coverage was required based on the amounts of BSAI groundfish received by the processor.

	<u>1992</u>	<u>1993</u>
<u>Shoreside Facilities</u>		
Total number of processor months	59	62
Processor months that received < 500 mt BSAI groundfish	16	15
Processor months that received 500 - 1000 mt BSAI groundfish	5	6
<u>Mothership Processors</u>		
Total number of processor months	92	85
Processor months that received < 500 mt BSAI groundfish	21	38
Processor months that received 500 - 1000 mt BSAI groundfish	12	12

Under Alternative 3, specified observer data on vessel bycatch of prohibited species would be authorized for release. As described in section 1 of this EA/RIR, members of the groundfish industry have requested that this information be disclosed to support independent industry initiatives to address the bycatch problem. The release of vessel specific bycatch amounts or rates of prohibited species also would identify for the industry those vessels that contribute most to the bycatch problem. The disclosure of haul by haul data for vessels participating in the groundfish trawl fisheries would allow for the development of timely, inseason guidance on potential bycatch problems that individual vessel owners could take action to avoid.

Representatives for the Alaska trawl industry have requested that the above observer data on specific hauls not be released for vessels participating in the rockfish, Greenland turbot, or Atka mackerel trawl fisheries because substantial competitive harm could result. These fisheries are conducted by a small number of vessels, involve relatively small amounts of quota, and are geographically specific in nature. Releasing observer data on individual hauls could effectively disclose trade secrets of the



current participants and cause them to suffer substantial economic harm. The rockfish, Greenland turbot, and Atka mackerel fisheries generally have low salmon bycatch rates and contribute relatively little to the overall salmon bycatch amounts annually experienced in the Alaska trawl fisheries. Consequently, excluding from disclosure the observer data collected onboard vessels participating in the rockfish, Greenland turbot, or Atka mackerel fisheries is not anticipated to impair the effectiveness of industry initiatives to address the salmon bycatch problem.

NMFS has determined that the disclosure of observer data on (1) vessel name and bycatch amounts or rates of prohibited species, and (2) location, depth, water temperature, and prohibited species bycatch rates associated with individual hauls for all trawl fisheries except the rockfish, Greenland turbot, and Atka mackerel fisheries could not reasonably be expected to cause substantial competitive harm to vessel operators, owners, or other persons involved in the groundfish fishing industry. Except for the noted exemptions, the groundfish fisheries generally are high volume fisheries that are conducted by a large number of vessels over a wide geographic area. Therefore, the disclosure of the haul specific observer data collected onboard vessels participating in these fisheries is not expected to divulge information on specific fishing operations in a manner that would result in substantial competitive harm.

In exceptional circumstances, vessel owners and operators may provide to the Regional Director written justification at the time observer data are submitted or within a reasonable time thereafter, that disclosure of the information could reasonably be expected to cause substantial competitive harm. The Regional Director would consider objections and specific grounds for nondisclosure prior to determining whether to release the observer data. An example of an exceptional circumstance that would warrant Regional Director consideration of nondisclosure of observer data would be when less than three vessels participate in a particular trawl fishery during a weekly reporting period and release of location or depth data for individual hauls observed onboard those vessels may result in competitive harm. Exceptional circumstances that would result in the nondisclosure of observer data on vessel name and weekly bycatch amounts or rates of prohibited species have not been identified by NMFS.

### 3.4 Reporting Costs

None of the alternatives considered requires additional recordkeeping or reporting costs other than those already required under existing regulations. Processors would be required to separately store salmon delivered by different vessels until an observer is available to count each vessel's salmon bycatch. To identify each vessel's retained salmon, processors would be required to identify each vessel's salmon



bycatch with vessel name and fish ticket number. This information already is required to be recorded in processor logbooks under 50 CFR 672.5 and 675.5 and would not entail additional recordkeeping or reporting burden to the processor.

### 3.5 Administrative, Enforcement, and Information Costs

Under Alternative 2, the elimination of the primary halibut PSC limit would reduce the number of halibut trawl bycatch quotas that must be monitored separately inseason to enforce closures. Excluding seasonal allocations, a total of 12 trawl halibut bycatch quotas currently are monitored separately inseason to enforce closures. Under alternative 2, this number would be reduced to six.

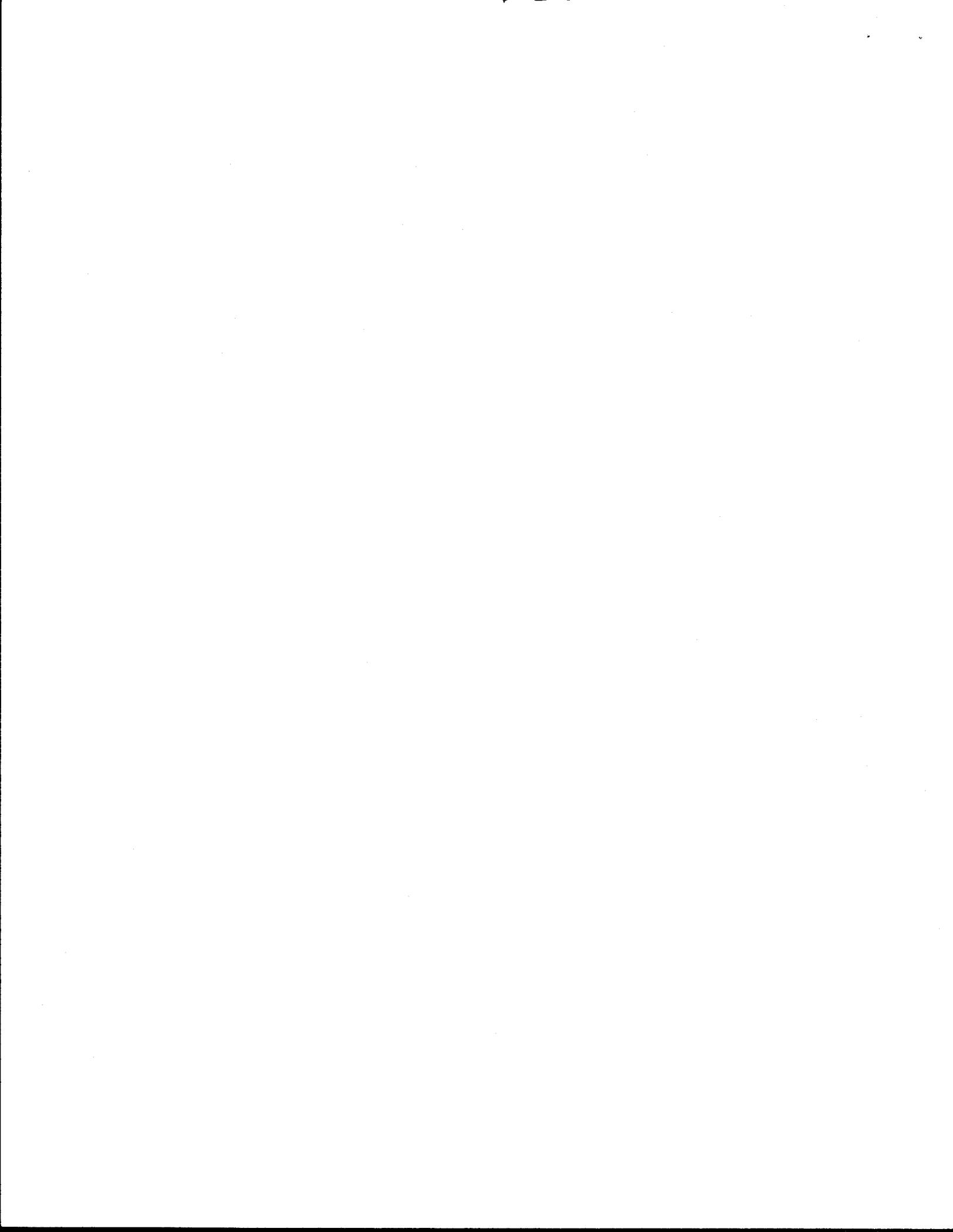
Decreasing the number of halibut bycatch quotas would decrease the difficulty and cost of managing halibut bycatch. It should also reduce the costs that the halibut PSC limit imposes on the groundfish trawl fleet by increasing the ability of the fleet to take the groundfish optimum yield in a cost effective manner.

Enforcement agencies will incur additional costs resulting from the enforcement and prosecution of persons who violate proposed management measures set forth under Alternative 3. The additional cost of enforcing mandatory retention of salmon until each fish has been counted by an observer is expected to be assimilated into existing staff workload, although enforcement of these measures likely would require that other enforcement activities be curtailed. No additional staff are expected to be hired to accommodate the additional workload.

The NMFS Observer Program and Alaska Region staff would incur additional workload required for timely review and posting on the NMFS bulletin board observer data authorize for release under Alternative 3. NMFS-certified observer also would be required to maintain two separate records of salmon bycatch. The first record would be that involved under normal observer sampling procedures. Observers would be required to separately maintain data on the number of retained salmon that are counted outside of normal observer sampling procedures. Assuming that this activity would be a priority activity for observers, other observer duties likely would be curtailed or eliminated to accommodate the collection of salmon bycatch data.

### 3.6 Summary of Economic Impacts: Distribution of Costs and Benefits

Regulations increase some costs, decrease others, and cause a redistribution of costs and benefits. The alternatives are expected to have different effect both on net benefits tot he Nation and on the distribution of those benefits. None of the alternatives are expected to have an annual effect of \$100



million.

None of the alternatives are expected to lead to a significant change in the prices paid by consumers, local governments, or geographic regions because the total supply of fishery products is not expected to be affected measurably. Costs of management and enforcement are not anticipated to change substantially.

None of the alternatives being considered would be expected to have an adverse effect on competition, employment, investment, productivity, innovation, or on the ability of U.S. based enterprises to compete with foreign enterprises in domestic or export markets.

None of the alternatives are expected to have any adverse effects on State, local or tribal governments or communities.

#### **4.0 REGULATORY FLEXIBILITY ANALYSIS**

The objective of the Regulatory Flexibility Act is to require consideration of the capacity of those affected by regulations to bear the direct and indirect costs of regulation. If an action will have a significant impact on a substantial number of small entities an Initial Regulatory Flexibility Analysis (IRFA) must be prepared to identify the need for the action, alternatives, potential costs and benefits of the action, the distribution of these impacts, and a determination of net benefits.

NMFS has defined all fish-harvesting or hatchery businesses that are independently owned and operated, not dominant in their field of operation, with annual receipts not in excess of \$2,000,000 as small businesses. In addition, seafood processors with 500 employees or less, wholesale industry members with 100 employees or less, not-for-profit enterprises, and government jurisdictions with a population of 50,000 or less are considered small entities. A "substantial number" of small entities would generally be 20 percent of the total universe of small entities affected by the regulation. A regulation would have a "significant impact" on these small entities if it resulted in a reduction in annual gross revenues by more than 5 percent, annual compliance costs that increased total costs of production by more than 5 percent, or compliance costs for small entities that are at least 10 percent higher than compliance costs as a percent of sales for large entities.

If an action is determined to affect a substantial number of small entities, the analysis must include:

- (1) description and estimate of the number of small entities and total number of entities in a particular



affected sector, and total number of small entities affected; and

(2) analysis of economic impact on small entities, including direct and indirect compliance costs, burden of completing paperwork or recordkeeping requirements, effect on the competitive position of small entities, effect on the small entity's cashflow and liquidity, and ability of small entities to remain in the market.

#### 4.1 Economic Impact on Small Entities

Every vessel operator participating in the Alaska groundfish fishery would be affected by the management measures proposed under Alternative 3 that would authorize the disclosure of specified observer data on prohibited species bycatch. All trawl vessel operators participating in the BSAI groundfish fisheries and most processors receiving BSAI groundfish would be further affected by measures that would require the mandatory retention of salmon under Alternative 3. The salmon retention measures would most affect vessel operators and processors participating in the BSAI pollock fishery because this fishery accounts for most of the salmon bycatch in the BSAI trawl fisheries.

Most catcher vessel operators harvesting groundfish off Alaska meet the definition of a small entity under the RFA. In 1992, 180 catcher vessels landed groundfish from the BSAI. All these vessels would be affected by the preferred alternatives, particularly those that participate in the pollock fishery (about 123 vessels). The economic impact on small entities under the proposed action would not result in a reduction in annual gross revenues by more than 5 percent, annual compliance costs that increased total costs of production by more than 5 percent, or compliance costs for small entities that are at least 10 percent higher than compliance costs as a percent of sales for large entities.

#### 5.0 SUMMARY AND CONCLUSIONS

Elimination of the primary halibut PSC mortality limit established for BSAI trawl operations under Alternative 2 would not jeopardize the management of the overall BSAI halibut mortality limit established for these fisheries (3,775 mt). This action would reduce administrative costs associated with BSAI halibut bycatch restrictions and potentially allow for more effective harvest of groundfish under prohibited species bycatch restrictions. Based on the results of a bycatch simulation model, elimination of the primary halibut PSC mortality limit would not significantly affect the bycatch of other prohibited species nor would this action significantly affect net value of the groundfish trawl catch.

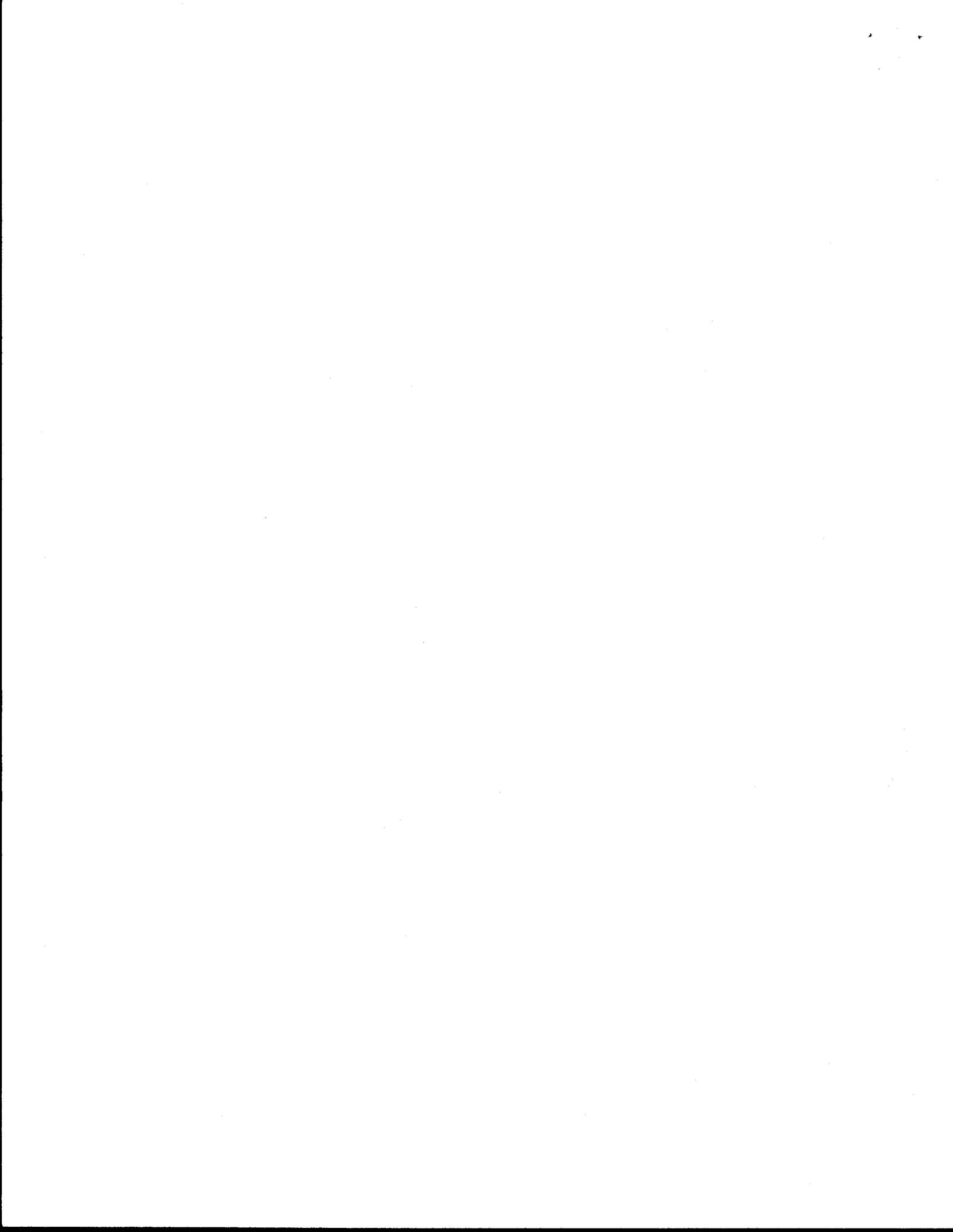


The preferred action under Alternative 3 to prohibit the discard of salmon until each fish is counted by a NMFS-certified observer would allow for the collection of better information on salmon bycatch in the BSAI trawl fisheries. This information could be used to assess future management measures developed to address the salmon bycatch problem experienced in the Alaska trawl fisheries. Costs to the industry to comply with the proposed action are not quantified, but are associated with lost fishing or production time if vessel or processor crew must sort and store salmon until an observer is available to count each fish. These costs are not expected to be significant given that salmon bycatch rates are relatively low (the maximum rates are experienced in the midwater pollock fishery, which averaged 0.07 and 0.22 salmon per mt groundfish during 1992 and 1993, respectively). These costs are reduced under Option 1 to Alternative 3, which would exempt mothership and shoreside processors from retaining salmon during those months the processors are not required to obtain observer coverage under regulations implementing the Observer Plan.

The release of observer data on prohibited species bycatch under Alternative 3 could have a positive effect to the extent that observer data on vessel bycatch of prohibited species would provide fishermen with information that could be used to reduce prohibited species bycatch rates and amounts.

#### **6.0 LIST OF REFERENCES**

National Marine Fisheries Service. 1993. Final environmental assessment for 1993 groundfish total allowable catch specifications implemented under the authority of the Fishery Management Plans for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area and Groundfish of the Gulf of Alaska. Alaska Fisheries Science Center, Seattle, Washington and the Alaska Region, P.O. Box 21668, Juneau, Alaska.



## 7.0 AGENCIES AND INDIVIDUALS CONSULTED

David Ackley  
Alaska Department of Fish  
and Game  
Capital Office Park  
1255 W. 8th Street  
P.O. Box 25526  
Juneau, Alaska 99802-5526

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

Dave Flannagan  
NMFS  
Alaska Enforcement Division  
P.O. Box 21668  
Juneau, Alaska 99802-1668

William Karp, Janet Wall, and  
Jerry Berger  
NMFS  
Alaska Fish. Science Center  
7600 Sand Point Way NE,  
Bldg. 4  
Seattle, Washington 98115

Andy Smoker  
NMFS, Alaska Region  
P.O. Box 21668  
Juneau, Alaska

Dave Colpo  
NMFS, Alaska Fisheries Science  
Center  
7600 Sand Point Way NE,  
Bldg. 4  
Seattle, Washington 98115

## 8.0 LIST OF PREPARERS

Susan Salveson  
NMFS Alaska Region  
P.O. Box 21668  
Juneau, Alaska

Joe Terry  
NMFS, Alaska Fisheries Science Center  
7600 Sand Point Way NE,  
Bldg. 4  
Seattle, Washington 98115

