



7:00 Stand down  
UNITED STATES DEPARTMENT OF COMMERCE  
Office of the Under Secretary for  
Oceans and Atmosphere  
Washington, D.C. 20230

SEP - 3 1998

To All Interested Government Agencies and Public Groups:

Under the National Environmental Policy Act, an environmental review has been performed on the following action.

TITLE: Final Rule to Implement a Stand Down Requirement for Catcher Vessels Transiting Between the Bering Sea and Aleutian Islands Area (BSAI) and the Gulf of Alaska (GOA)

LOCATION: Federal Waters of the Gulf of Alaska and of the Bering Sea and Aleutian Islands

SUMMARY: This action will implement a stand down requirement for trawl catcher vessels transiting between the BSAI and GOA. It is necessary to prevent unexpected shifts of fishing effort between BSAI and GOA fisheries that can lead to overharvests of total allowable catch in the Western and Central Regulatory Areas of the GOA.

RESPONSIBLE OFFICIAL: Steven Pennoyer  
Administrator  
Alaska Region  
National Marine Fisheries Service  
P.O. Box 21668  
Juneau, AK 99802  
Phone: 907-586-7221

The environmental review process led us to conclude that this action will not have a significant impact on the environment. Therefore, an environmental impact statement was not prepared. A copy of the finding of no significant impact, including the environmental assessment, is enclosed for your information. Also, please send one copy of your comment to me in Room 5805, PSP, U.S. Department of Commerce, Washington, D.C. 20230.

Sincerely,

Acting NEPA Coordinator

Enclosure



ENVIRONMENTAL ASSESSMENT/REGULATORY IMPACT REVIEW/FINAL REGULATORY  
FLEXIBILITY ANALYSIS

FOR

A REGULATORY AMENDMENT

TO ESTABLISH

A STAND DOWN REQUIREMENT FOR VESSELS TRANSITING BETWEEN THE BERING SEA  
AND ALEUTIAN ISLANDS MANAGEMENT AREA AND THE GULF OF ALASKA

Prepared by

National Marine Fisheries Service  
Alaska Regional Office

*August 1998*

## EXECUTIVE SUMMARY

In recent years, management of the inshore pollock and Pacific cod fisheries of the Western and Central (W/C) Regulatory Areas of the GOA has become increasingly difficult and the risk of harvest overruns has grown due to total allowable catch (TAC) amounts that are small relative to the potential fishing effort. The problem has been most acute in the Western Regulatory Area of the GOA due to the constant potential that numerous large catcher vessels based in the Bering Sea will cross over to the GOA to participate in pollock and Pacific cod openings that have relatively small TACs. NMFS currently lacks a preseason vessel registration program that could gauge potential effort in these fisheries prior to openings, and inseason catch information in these fisheries is neither timely nor accurate enough to allow adequate management.

The problems and risks associated with managing short term fisheries will continue to present themselves as long as NMFS does not have sufficient tools to project and manage fishing effort in these fisheries. At its February 1998 Council meeting, the Council considered two independent actions to address the management problems associated with short term fisheries, a vessel registration program for "at risk" fisheries and a stand down period for groundfish vessels transiting between the BSAI and GOA or vice versa. The Council recommended that NMFS proceed immediately with a stand down requirement to be in place by September 1998, and that NMFS initiate development of a vessel registration system that would be implemented at a later date as a separate action. While this analysis covers both management proposals, the action under consideration at this time is the stand down requirement only.

**Alternative 1: No Action.** The groundfish fisheries of the BSAI and GOA would continue to be managed under the existing management regime. The weekly production reports and daily production reports submitted to NMFS by processors and daily observer reports are the current tools for managing "at risk" fisheries.

**Alternative 2: Establish a vessel registration program for "At risk" fisheries which meet certain criteria.** NMFS would establish criteria to determine which fisheries would require registration. Based on these criteria, NMFS would create a roster of "registration fisheries" that would be announced at the beginning of each year and supplemented as necessary on an inseason basis throughout the year. Criteria for establishing a registration requirement for a fishery could include: (1) the size of the TAC amount or PSC limit specified for the fishery relative to the degree of interest in that fishery, (2) a fishery for which the TAC or PSC limit was exceeded by a significant amount in the previous year and the current year's quota and expected effort are similar, (3) a fishery for which the above two criteria may not apply but an expanded interest has developed inseason, and (4) a "mop-up" fishery. Vessel operators would be required to register with NMFS a certain number of days before beginning directed fishing in a registration fishery and penalties would be established for non-compliance. The vessel registration program could begin with the pollock and Pacific cod fisheries of the western and central GOA, possibly as early as late-1998 depending upon staff resources. Additional fisheries could be assigned registration status in subsequent years once automated procedures for registering vessels are developed and tested.

Under a vessel registration program, the fleet as a whole will benefit if NMFS is able to manage "at risk" fisheries so that quotas are more fully harvested and the overhead costs associated with re-crewing and transiting to the fishing grounds for short term "mop-up" openings could be avoided. A registration requirement would reduce the flexibility of vessel operators to enter and leave fisheries at will. In some cases, this could pose costs for certain operations if they realize at mid-course that would prefer to be participating in a short term fishery for which they have not registered. Nevertheless, while a registration requirement for certain "at risk" fisheries will increase the constraints on the fleet, it will serve to

increase the ability of NMFS to manage such fisheries to obtain optimum yield and provide the greatest net benefit to the nation.

**Alternative 3 (PREFERRED): Establish a stand down requirement for vessels transiting between the BSAI and GOA.** Under such a requirement, vessels transiting between the BSAI and GOA or vice versa would be required to stand down for a period of time before beginning fishing in the new area. The following options for a vessel stand down requirement are considered in the analysis.

#### **Vessel and gear options.**

- Option 1.** Stand down requirement would apply to all groundfish vessels
- Option 2.** Stand down requirement would apply to trawl vessels only
- Option 3. (PREFERRED)** Stand down requirement would apply to trawl catcher vessels only

#### **Fishery options**

- Option 1. (PREFERRED)** Stand down requirement would apply to all target fisheries.
- Option 2.** Stand down requirement would apply to vessels engaged in directed fishing for pollock and Pacific cod only.

#### **Options for length of stand down period**

- Option 1.** 48 hours (**PREFERRED for Central Regulatory Area**)
- Option 2.** 72 hours (**PREFERRED for Western Regulatory Area**)
- Option 3.** 96 hours

#### **Options for beginning and ending of stand down period**

- Option 1.** Stand down period begins at the time gear retrieval is completed in one area and ends when gear is deployed in the new area.
- Option 2. (PREFERRED)** Stand down period begins on the date of delivery and fishing may resume in the new area at 12:00 p.m. A.I.t 2, 3, or 4 days after the date of delivery.

The most precisely targeted stand down requirement would be a program applied to trawl catcher vessels only. Little reason exists to impose a stand down requirement on catcher processors or vessels using fixed gear, which have not posed management difficulties in the past due to rapid shifts of effort. The most effective and easily enforced stand down requirement would be one that applies to all fishing activity regardless of target fishery. NMFS catcher vessel logbooks currently require that fishermen log their time of gear deployment, time of gear retrieval, and date of delivery, but not the time of delivery. Therefore, the most easily implemented stand down requirement for 1998 would be one that starts either at the time of gear retrieval or on the date of delivery. A stand down requirement that begins at the date and time of delivery would require logbook and recordkeeping and reporting changes which would delay implementation until 1999.

A stand down requirement limited to certain target fisheries such as pollock and Pacific cod could be difficult or impossible to enforce, could increase regulatory discards of these species, and could be in conflict with the objectives of the improved retention/improved utilization program recently approved as

Amendments 49/49. Care must be taken in the design and implementation of both a vessel registration program and a vessel stand down requirement to prevent inadvertent increases in regulatory discards.

## TABLE OF CONTENTS

1.0	INTRODUCTION .....	2
1.1	Purpose of and Need for the Action .....	2
1.2	Alternatives Considered .....	3
1.2.1	Alternative 1: No Action .....	3
1.2.2	Alternative 2: Vessel Registration Program .....	4
1.2.3	Alternative 3 ( PREFERRED): Stand Down Requirement .....	4
1.3	“At Risk” Fisheries .....	4
1.3.1	Pollock in the Western GOA .....	5
1.3.2	Inshore Pacific Cod in the Western GOA .....	6
1.3.3	Pacific Ocean Perch (POP) in the Central GOA .....	6
1.3.4	Offshore Pacific Cod in the GOA .....	7
1.4	Implementation and Enforcement of a Vessel Registration Program .....	7
1.4.1	Criteria for Determining which Fisheries would Require Registration .....	7
1.4.2	Procedures for Registering Vessels .....	8
1.5	Shifts of Effort Between the BSAI and GOA .....	9
1.6	Implementation and Enforcement of a Stand Down Requirement for Vessels Transiting Between the BSAI and GOA .....	13
1.6.1	Vessel and Gear Options .....	13
1.6.2	Target Fishery Options .....	13
1.6.3	Options for Length of Stand Down Period .....	14
1.6.4	Options for Beginning and Ending of Stand Down Period .....	15
2.0	NEPA REQUIREMENTS: ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES ...	16
2.1	Environmental Impacts of the Alternatives .....	16
2.2	Impacts on Endangered or Threatened Species .....	16
2.3	Impacts on Marine Mammals .....	20
2.4	Coastal Zone Management Act .....	20
2.5	Conclusions or Finding of No Significant Impact .....	20
3.0	REGULATORY IMPACT REVIEW: ECONOMIC AND SOCIOECONOMIC IMPACTS OF THE ALTERNATIVES .....	21
3.1	Economic Effects of Alternative 1: No Action .....	22
3.2	Economic Effects of Alternative 2: Vessel Registration Program for Fisheries Which Meet Certain Criteria .....	22
3.3	Economic Effects of Alternative 3 (PREFERRED): Stand Down Requirement for Catcher Vessels Transiting Between the BSAI and GOA .....	23
3.4	Economic Impacts on Small Entities .....	23
4.0	SUMMARY AND CONCLUSIONS .....	25
5.0	REFERENCES .....	26
6.0	LIST OF PREPARERS .....	27

## LIST OF TABLES

Table 1.	Total catch of pollock from Area 610 by location of processor in metric tons. ....	4
Table 2.	Total inshore sector catch of Pacific cod from Area 610 by location of processor in metric tons .....	5
Table 3.	Estimated number of catcher vessels transiting between the BSAI and GOA and vice versa in 1997 by gear type, vessel size, and length of stand down period. Stand down period is measured from the time of gear retrieval in one area to the time of gear deployment in the new area .....	9

## LIST OF FIGURES

Figure 1.	Estimated number of catcher vessels fishing with bottom trawl gear and transiting between the BSAI and GOA in 1997 by month and length of stand down period. Stand down period is measured from time of gear retrieval in one area to the time of gear deployment in the next area .....	10
Figure 2.	Estimated number of catcher vessels fishing with pelagic trawl gear and transiting between the BSAI and BSAI in 1997 by month and length of stand down period. Stand down period is measured from time of gear retrieval in one area to the time of gear deployment in the next area .....	11

## 1.0 INTRODUCTION

The groundfish fisheries in the Exclusive Economic Zone (EEZ) (3 to 200 miles offshore) off Alaska are managed under the Fishery Management Plan for Groundfish of the Gulf of Alaska and the Fishery Management Plan for the Groundfish Fisheries of the Bering Sea and Aleutian Islands Area. Both fishery management plans (FMPs) were prepared by the North Pacific Fishery Management Council (Council) under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). The Gulf of Alaska (GOA) FMP was approved by the Secretary of Commerce and became effective in 1978 and the Bering Sea and Aleutian Islands Area (BSAI) FMP was approved and became effective in 1982.

Actions taken to amend FMPs or implement other regulations governing the groundfish fisheries must meet the requirements of Federal laws and regulations. In addition to the Magnuson-Stevens Act, 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 1 also examines implementation and enforcement issues related to the alternatives under consideration. Section 2 contains information on the biological and environmental impacts of the alternatives as required by NEPA. Impacts on endangered species and marine mammals are also 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 including the impacts of the proposed action on small businesses.

This Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis examines two management programs: a vessel registration program for "at risk" short-term fisheries, and a mandatory stand down requirement for certain vessels transiting between the BSAI and GOA and vice versa. In February 1998, the Council voted to proceed with the development of both programs, with the recommendation that the stand down requirement be implemented immediately so that it is in effect by the September 1998 pollock fisheries in the BSAI and GOA. The Council believed that additional development was required for the vessel registration program before submission of a proposed rule to implement that program. For that reason, the only action under consideration at this time is the vessel stand down requirement.

### 1.1 Purpose of and Need for the Action

**Management of "at risk" short-term fisheries.** In recent years, several fisheries in the BSAI and GOA have been "at risk" of exceeding their specified total allowable catch (TAC) or prohibited species catch (PSC) limits. The fisheries that are "at risk" are characterized as short in duration, usually less than 2 weeks, due to TACs that are small relative to the fishing effort. Catch information in these fisheries, obtained through the current reporting procedures, are neither timely nor accurate enough to allow proper management. Under the existing management regime, NMFS does not have advance knowledge of fishery specific effort, nor the authority to obtain such information.

To manage fisheries so that the TAC is taken but not exceeded, inseason managers must know the amount of quota available for harvest (the directed fishing allowance) and the rate the directed fishing allowance will be harvested. That rate is dependent on the amount of fishing effort deployed in the

fishery and the catchability or catch per unit effort (CPUE) realized. However, without advance information, the effort deployed in a particular fishery is difficult to predict. At times, available TACs or PSC limits are small enough that the fishery is kept closed to prevent risking an overrun of the TAC. At other times, when that risk is taken, small quotas are exceeded because unexpected effort materializes, or CPUE exceeds expectations. In the former instance, groundfish catch is foregone, in the latter, allowable catches are exceeded, at best resulting in discards of further catches, and at worst, overfishing of the stock.

**Displacement of western GOA fishermen.** In addition to the problems associated with managing short term fisheries, individuals who participate primarily in western GOA fisheries have expressed concern that their fishing seasons are sometimes dramatically shortened when large vessels move from the BSAI fisheries into GOA fisheries. Various options have been proposed by western GOA fishermen over the years to help mitigate their concerns. These proposals have included (1) trip limits, (2) exclusive area registration for the BSAI and GOA, (3) a stand down requirements for vessels transiting between the BSAI and GOA, (4) shrinking Area 610 by shifting eastward its western boundary from 170°W. latitude to the latitude of Scotch Cap light on the west end of Unimak Island, (5) eliminating the June pollock opening in the GOA and reallocating its TAC among the January and September openings, and (6) dropping the requirement that NMFS publish fishery closures in the Federal Register in advance.

At its September 1997 meeting, the Council received a report from an industry committee that was formed to examine the possibility of trip limits for western GOA pollock and Pacific cod fisheries. However, because the industry committee failed to reach consensus on a trip limit proposal for western GOA fisheries, the Council delayed formal analysis of trip limit options and voted to proceed with analysis of only two short term measures for western GOA fisheries: (1) A 48-hour stand down period for vessels switching between the BSAI and GOA and vice versa, and (2) a requirement that vessels pre-register in western and central GOA fisheries before they are allowed to participate in those fisheries. In the longer term, the Council has scheduled a discussion of GOA management measures for pollock and Pacific cod in the western and central GOA for its February 1998 meeting. At that time, the Council intends to develop a problem statement and identify the specific alternatives to be developed further, with the intent of implementing the measures by January 1, 1999.

At its February 1998 Council meeting, the Council considered two independent actions to address the management problems associated with short term fisheries, a vessel registration program for "at risk" fisheries and a stand down period for groundfish vessels transiting between the BSAI and GOA or vice versa. The Council recommended that NMFS proceed immediately with a stand down requirement to be in place by September 1998, and that NMFS initiate development of a vessel registration system that would be implemented at a later date as a separate action.

## **1.2 Alternatives Considered**

The following alternatives are considered in this analysis. Alternatives 2 and 3 to the status quo should not be considered mutually exclusive and may complement each other. Either alternative or both could be adopted. Amendments 52/52 would provide a general framework that would authorize the types of management measures identified in Alternative 2 and/or Alternative 3, although the specific details of each management measure would be set out in regulation.

**1.2.1 Alternative 1: No Action.** The groundfish fisheries of the BSAI and GOA would continue to be managed under the existing management regime. The weekly production reports and daily production

reports submitted to NMFS by processors and daily observer reports are the current tools for managing “at risk” fisheries.

**1.2.2 Alternative 2: Vessel Registration Program for “At risk” fisheries which meet certain criteria.** NMFS would establish criteria to determine which fisheries would require registration. Based on these criteria, NMFS would create a roster of “registration fisheries” that would be announced in the beginning of the year supplemented as necessary on an inseason basis throughout the year. Criteria for establishing a registration requirement for a fishery could include: (1) the size of the TAC amount or PSC limit specified for the fishery relative to the degree of interest in that fishery, (2) a fishery for which the TAC or PSC limit was exceeded by a significant amount in the previous year and the current year’s quota and expected effort are similar, (3) a fishery for which the above two criteria may not apply but an expanded interest has developed inseason, and (4) a “mop-up” fishery. Vessel operators would be required to register with NMFS a certain number of days before beginning directed fishing in a registration fishery and penalties would be established for non-compliance. The vessel registration program could begin with the pollock and Pacific cod fisheries of the western and central GOA, possibly as early as late-1998 depending upon staff resources. Additional fisheries could be assigned registration status in subsequent years once automated procedures for registering vessels are developed and tested.

**1.2.3 Alternative 3 ( PREFERRED): Stand Down Requirement for vessels transiting between the BSAI and GOA.** Under such a requirement, vessels transiting between the BSAI and GOA or vice versa would be required to stand down for a period of time before beginning fishing in the new area.

#### **Vessel and gear options.**

- Option 1.** Stand down requirement would apply to all groundfish vessels
- Option 2.** Stand down requirement would apply to trawl vessels only
- Option 3. (PREFERRED)** Stand down requirement would apply to trawl catcher vessels only

#### **Fishery options**

- Option 1. (PREFERRED)** Stand down requirement would apply to all target fisheries.
- Option 2.** Stand down requirement would apply to vessels engaged in directed fishing for pollock and Pacific cod only.

#### **Options for length of stand down period**

- Option 1.** 48 hours **(PREFERRED for Central Regulatory Area)**
- Option 2.** 72 hours **(PREFERRED for Western Regulatory Area)**
- Option 3.** 96 hours

#### **Options for beginning and ending of stand down period**

- Option 1.** Stand down period begins at the time gear retrieval is completed in one area and ends when gear is deployed in the new area.
- Option 2. (PREFERRED)** Stand down period begins on the date of delivery and fishing may resume in the new area at 12:00 p.m. A.l.t 2, 3, or 4 days after the date of delivery.

### 1.3 “At Risk” Fisheries

A number of fisheries in the BSAI and GOA may be considered “at risk” of quota overruns due to small TACs relative to potential effort, or the unpredictability of effort in the fishery. These include pollock in all areas of the GOA, Pacific cod in the GOA, rockfish in the GOA, Atka Mackerel in the Aleutian Islands and Pacific Ocean Perch (POP) in the Aleutian Islands. Several of these fisheries are described below to underscore the problems associated with managing these fisheries without advance information on potential effort.

#### 1.3.1 Pollock in the Western GOA

The pollock fishery in Area 610 has been one of the most difficult fisheries for NMFS to manage in recent years due to a small TAC relative to potential effort and the constant potential that numerous large catcher vessels based in the BSAI may cross over to the GOA to participate in this fishery. The disposition of pollock catch from area 610 from 1992 to 1997 is displayed on Table 1, which illustrates the unpredictability of effort in this fishery. In 1992, the fishery was dominated by catcher vessels delivering to Bering Sea-based shore plants (Dutch Harbor and Akutan), and several at-sea factory trawlers and motherships. Vessels delivering to GOA-based shore plants accounted for only 11 percent of the total catch from Area 610. In 1993, catcher vessels delivering to Bering Sea-based shore plants did not participate in this fishery, however, catcher vessels delivering to a single Bering Sea-based floating processor accounted for over 50 percent of the catch from Area 610. In 1994 and 1995 the catch of pollock from Area 610 was distributed relatively evenly between catcher vessels delivering to Bering sea-based shore plants and catcher vessels delivering to GOA-based shore plants. At-sea processors (catcher/processors and floating processors) were largely absent from the fishery. During 1994 and 1995, participation by Bering Sea-based vessels occurred only during the June, July, and October quarterly pollock openings in Area 610 during which time the Bering Sea pollock fisheries were closed.

In 1996, due in part to the unpredictable level of effort in GOA pollock fisheries, the Council approved Amendment 45 to the GOA FMP which combined the third and fourth quarterly pollock openings into a single seasonal opening on September 1. One of the objectives of Amendment 45 was to schedule this combined third pollock opening in the GOA at the same time as the Bering Sea pollock “B”

season to reduce the incentive for Bering Sea-based vessels to crossover and participate in GOA pollock fisheries. In 1996, Amendment 45 achieved this objective as Bering Sea-based vessels accounted for only 3 percent of the total catch of Area 610 pollock.

However, this situation changed again dramatically in 1997 as numerous Bering Sea-based catcher vessels chose, at the last moment, to cross over to the GOA during the September pollock opening in Area 610, despite the fact that the Bering Sea pollock fishery was still open at that time. On September 4, 1997, Based on the anticipated level of effort in the Area 610 pollock fishery, NMFS announced a

Table 1. Total catch of pollock from Area 610 by location of processor in metric tons.

Year	BSAI <sup>1</sup>	GOA <sup>2</sup>	At-sea <sup>3</sup>	Total
1992	9,611	2,124	6,471	18,206
1993	388	9,024	11,671	21,083
1994	6,449	9,753	259	16,461
1995	14,523	14,200	1,194	29,917
1996	815	22,363	954	24,131
1997	7,663	14,680	1,342	23,686

<sup>1</sup>Includes shore-based processors in Dutch Harbor and Akutan

<sup>2</sup>Includes shore-based processors in Sand Point, King Cove, and Kodiak

<sup>3</sup>Includes factory trawlers, factory longliners, and floating processors.

closure for the fishery effective September 7, 1997. Once the closure date was announced, a large number of Bering Sea-based vessels entered the GOA to participate in the final 2 days of the fishery and these vessels harvested approximately 7,000 mt of pollock from Area 610 in the final 2 days of the fishery. As a consequence of this unanticipated effort from Bering Sea-based vessels, the 1997 annual TAC for Area 610 of 18,600 mt was exceeded by 8,017 mt or 43 percent of the total. If a registration program had been in effect for this fishery in 1997, it would have provided NMFS with the information necessary to prevent such a substantial overrun of the TAC.

### 1.3.2 Inshore Pacific Cod in the Western GOA

The inshore Pacific cod fishery in Area 610 has a similar history of participation by vessels based on both the BSAI and GOA. The total inshore catch of Pacific cod from Area 610 by location of processor is displayed in Table 2. While shifts of effort in this fishery are not as dramatic as with the pollock fishery in Area 610, effort is none the less sometimes difficult to predict in this fishery. The 1997 fishery is a case in point. In March 1997, after announcing the closure of the inshore Pacific cod fishery in Area 610 effective March 3, 1997, NMFS re-opened the fishery on March 10 for a 24 hour "mop-up" fishery to harvest a small amount of remaining TAC on the assumption that effort in the fishery would continue at the level experienced during January and February up to the March 3 closure.

Until March 3, 1997, catcher vessels based in the Bering Sea had not participated in the Pacific cod fishery in Area 610 to any great extent and were not expected to participate in the 24-hour "mop-up" fishery. However, a substantial number of Bering Sea-based catcher vessels entered the GOA on March 10, 1997, and harvested over 1,200 mt of Pacific cod during that 24 hour opening. As a consequence of this

Table 2. Total inshore sector catch of Pacific cod from Area 610 by location of processor in metric tons.

Year	BSAI <sup>1</sup>	GOA <sup>2</sup>	At-sea <sup>3</sup>	Total
1992	1,091	16,229	1,318	18,638
1993	63	10,293	5,539	15,895
1994	161	10,789	3,777	14,728
1995	2,357	10,289	5,501	18,146
1996	155	13,769	3,939	17,862
1997	1,256	17,593	4,081	22,930

<sup>1</sup>Includes shore-based processors in Dutch Harbor and Akutan  
<sup>2</sup>Includes shore-based processors in Sand Point, King Cove, and Kodiak  
<sup>3</sup>Includes inshore catcher/processors and inshore floating processors.

unanticipated effort, the 21,803 mt Pacific cod TAC for Area 610 was exceeded by 1,288 mt or 6 percent of the total. If a registration program had been in effect for this fishery in 1997, it would have provided NMFS with the information necessary to prevent such a substantial overharvest of the TAC. An overharvest of the Pacific cod TAC in the GOA has the potential to significantly affect State-managed Pacific cod fisheries in State waters as well as IFQ fisheries that normally retain incidental catch of Pacific cod.

### 1.3.3 Pacific Ocean Perch (POP) in the Central GOA

In 1996, both the level of effort and CPUE in the central GOA POP fishery exceeded preseason expectations, and the TAC of 3,333 mt specified for that area was exceeded by 1,812 mt or 54 percent. As a result, NMFS was forced to close other fisheries that were expected to experience bycatch of POP in order to prevent overfishing of the species. A combination of factors made this fishery particularly difficult to estimate preseason and lead to the 1996 overharvest of POP. First, NMFS did not have

adequate estimates of the effort that would be deployed in this fishery. In 1996, Amendment 49 to the FMP became effective which combined the July and October quarterly allowances of pollock TAC into a single seasonal allowance on September 1. Consequently, many catcher vessels were available in July to fish for POP at a time when they had fished for pollock in previous years. Second, the CPUE in this fishery exceeded the preseason expectations of both NMFS and the industry. While a vessel registration program would not have given NMFS advance warning of the high CPUE in the fishery, it would have provided NMFS with advance warning that a large number of catcher vessels intended to participate in the POP fishery for the first time, and would have given NMFS the information necessary to project the attainment of the TAC on an earlier date.

#### **1.3.4 Offshore Pacific Cod in the GOA**

The offshore Pacific cod fishery in the GOA is another fishery that has proven problematic for NMFS due to a small TAC relative to the potential effort. In the GOA, 90 percent of the Pacific cod TAC is allocated to the inshore sector leaving a very small TAC for the offshore sector relative to the size of the offshore fleet. In 1996, the difficulty of managing this fishery without advance information was underscored. In 1996, a number of factory trawlers checked into the central GOA indicating flatfish as their target species. It was not until NMFS began to receive weekly production reports that it became apparent that most of these vessels had high catches of and were in part targeting on Pacific cod. By the time NMFS realized that numerous catcher/processors were targeting on Pacific cod and was able to close the fishery, the 1996 TAC of 4,290 for the offshore sector in the central GOA was exceeded by 1,061 mt or 25 percent of the total.

In 1997, industry favored a March opening for offshore Pacific cod in the GOA. However, due to the 1996 experience, the difficulty of projecting effort in the fishery, and the small available TAC, NMFS believed that a March opening would have been unmanageable and would have posed a substantial risk of overharvest of the TAC. As a result, NMFS delayed opening the offshore Pacific cod fishery until October at which time very few vessels remained interested in the fishery. If a vessel registration program had been in effect for this fishery in 1997, NMFS could have obtained sufficient information to open the fishery in March when the majority of the fleet would have preferred to fish.

#### **1.4 Implementation and Enforcement of a Vessel Registration Program**

Implementation and enforcement of a vessel registration program for short term fisheries requires: (1) establishing criteria to determine which fisheries would require pre-registration, and (2) designing procedures for registering vessels that wish to participate in registration fisheries.

##### **1.4.1 Criteria for Determining which Fisheries would Require Registration**

The first element to a vessel pre-registration program is establishing criteria to determine which fisheries would require pre-registration. Fisheries could be defined on the basis of area, gear type, target species or bycatch species. Initial criteria could include:

1. The amount of available TAC or PSC allowance relative to the degree of interest in the fishery. A small TAC would not necessarily indicate that pre-registration is necessary for management, sufficient interest in the fishery is also necessary. For example, squid has a relatively small TAC in the BSAI, however, there is little interest in fishing for it at this time.

2. Fisheries for which the TAC or PSC allowance was exceeded by a significant amount in the previous year when the current years numbers are similar.
3. A fishery for which the first two criteria may not apply but for which an expanded interest has developed inseason. Expanded interest in a fishery may develop inseason when closures in other fisheries reduce the opportunities to target on alternative species.
4. "Mop-up" fisheries. These typically occur inseason and are associated with fisheries that were closed prior to the attainment of the directed fishing allowance.

NMFS would provide prior notification of which fisheries would require pre-registration. For most "at risk" fisheries, the notification would occur at the beginning of the fishing year. Registration requirements for each fishery would be announced in the *Federal Register* and through news release on the NMFS, Alaska Region home page and bulletin board. However, a certain amount of flexibility should be built into the system. For example, if a fishery of intermediate size was anticipated to gain a large amount of participation during the season due to closures of other fisheries, NMFS could, with notification, place it in registration status. Such notification would occur through news release and publication in the *Federal Register*.

#### 1.4.2 Procedures for Registering Vessels

**Time-frame for registration.** Each vessel intending to participate in a registration fishery (e.g. retain catch in excess of the maximum retainable bycatch amount in effect for the fishery) would be required to register for that fishery in advance of participating. To be of benefit to management, registration would be necessary at least 4 days in advance of the time a vessel operator intends to enter a registration fishery. This is especially so for very short-term fisheries such as "mop-up" fisheries where it is often necessary to set the closure date and time in advance.

**Registration for multiple fisheries.** A vessel registration program must be designed so that vessel operators may only be registered in one fishery at a time. Otherwise, vessel operators could speculatively register in fisheries for which they have no intent of participating. If vessels register for a fishery and do not subsequently participate in that fishery, the erroneous estimate of fishing effort could lead NMFS to close the fishery prematurely resulting in loss of fishing opportunity for the actual participants, or increased costs if a "mop-up" fishery became necessary. However, a registration program could be designed so that a vessel operator could register for several fisheries in sequence. For example, a vessel operator may indicate that he intends to participate in the pollock fishery in Area 610 until that area closes, and then shift immediately to Area 620 where he will continue to fish until that area closes. The greater the number of registration fisheries in the BSAI and GOA the more complex the program will be to implement.

A vessel registration program also must be designed to accommodate vessels that may, in the course of normal operations, retain more than one target species at a time. In these multi-species fishery situations, it may make more sense to base a vessel registration requirement on area and gear type rather than target species.

**Registration methods.** Several options exist for registering vessels for particular fisheries. Initially, vessels could be required to contact the NMFS Regional Office by telephone to provide the vessel name, Federal groundfish permit number, name of operator, intended fishery, and estimated daily fishing capacity. Vessel operators would receive a registration number for that fishery which would serve as

proof of registration. Such a system would be relatively labor intensive for NMFS inseason management, and staff constraints would severely limit the number of fisheries that could be placed registration status at one time.

A second possible method for managing a vessel registration program would be through an automated telephone system that would allow a vessel operator to contact NMFS by telephone and respond to a series of automated questions by keying numbers on a touch tone phone pad to electronically register for a fishery. For security reasons, such a program would require some method for verification, such as a PIN number that could be issued to vessels on an annual basis with their Federal permits. Due to the complications associated with setting up an automated telephone system and assigning PIN numbers to vessels, such a system could not be in place prior to 1999 at the earliest.

Ultimately, the electronic reporting program currently under development by NMFS could be used to administer a vessel registration program for catcher/processors. Minor modifications could be made to the electronic reporting software currently under development by NMFS to accommodate electronic registration by catcher/processors for registration fisheries. However, the electronic reporting requirements currently under development will not be extended to catcher vessels. Consequently, if the electronic reporting program is modified to accommodate a vessel registration program, processors and motherships would have to register their catcher vessels. Such a program would require close cooperation between catcher vessel operators and the processors to which they deliver and processors would have to be authorized to act on behalf of their catcher vessels.

**Monitoring and enforcement.** Monitoring vessel compliance with a registration program will be relatively simple and could be accomplished through after the fact examination of weekly processor reports, observer reports, and fish tickets.

NMFS has already established range of enforcement remedies for fisheries violations. The penalties for violating any of the proposed measures under Amendments 52/52 would fall within this range of enforcement remedies. Any person committing, or vessel used in the commission of a violation of a vessel registration requirement would be subject to the penalty and forfeiture provisions of the Magnuson-Stevens Act, and to other applicable law. The Magnuson-Stevens Act provides several enforcement remedies for violations including:

1. Issuance of written warnings.
2. Assessment of a civil money penalty.
3. Permit sanctions.
4. Judicial forfeiture action against the vessel and its catch.
5. Criminal prosecution (for some offenses).

## 1.5 Shifts of Effort Between the BSAI and GOA

Table 1 displays the estimated number of trawl catcher vessels transiting between the BSAI and GOA and vice versa in 1997 displayed by vessel size, gear type (pelagic or bottom trawl) and length of stand down period. Comparable data was not compiled for catcher processors or vessels using fixed gear because these vessels have not posed the same management difficulties due to unpredictable shifts of effort between areas. Because the haul-by-haul data used to generate Table 1 does not identify target fisheries, it is not possible to calculate the number of

vessels transiting between the BSAI and GOA by target fishery. Figures 1 and 2 display the number of vessels transiting between the BSAI and GOA on a month-by-month basis. A cross comparison of the months in which vessel transits have occurred, with the fisheries that are open in both areas during that month, suggests that the vessels using bottom trawl gear are primarily engaged in directed fishing for Pacific cod, and the vessels using pelagic trawl gear are almost certainly engaged in directed fishing for pollock.

Table 3. Estimated number of catcher vessels transiting between the BSAI and GOA and vice versa in 1997 by gear type, vessel size, and length of stand down period. Stand down period is measured from the time of gear retrieval in one area to the time of gear deployment in the new area.

	<i>Stand down period in hours</i>				
	<i>0-24</i>	<i>24-48</i>	<i>48-72</i>	<i>72-96</i>	<i>over 96</i>
<i>Transits from BSAI to GOA</i>					
	<i>Bottom trawl</i>				
Vessels under 125 ft	37	10	0	0	57
Vessels over 125 ft	11	2	2	1	1
	<i>Pelagic trawl</i>				
under 125 pelagic trawl	13	3	3	10	23
over 125' pelagic trawl	13	2	3	0	5
<i>Transits from GOA to BSAI</i>					
	<i>Bottom trawl</i>				
Vessels under 125 ft	3	7	7	0	33
Vessels over 125 ft	1	3	0	0	9
	<i>Pelagic trawl</i>				
under 125 pelagic trawl	7	3	3	3	43
over 125' pelagic trawl	1	1	1	0	1

Source: NMFS Observer data

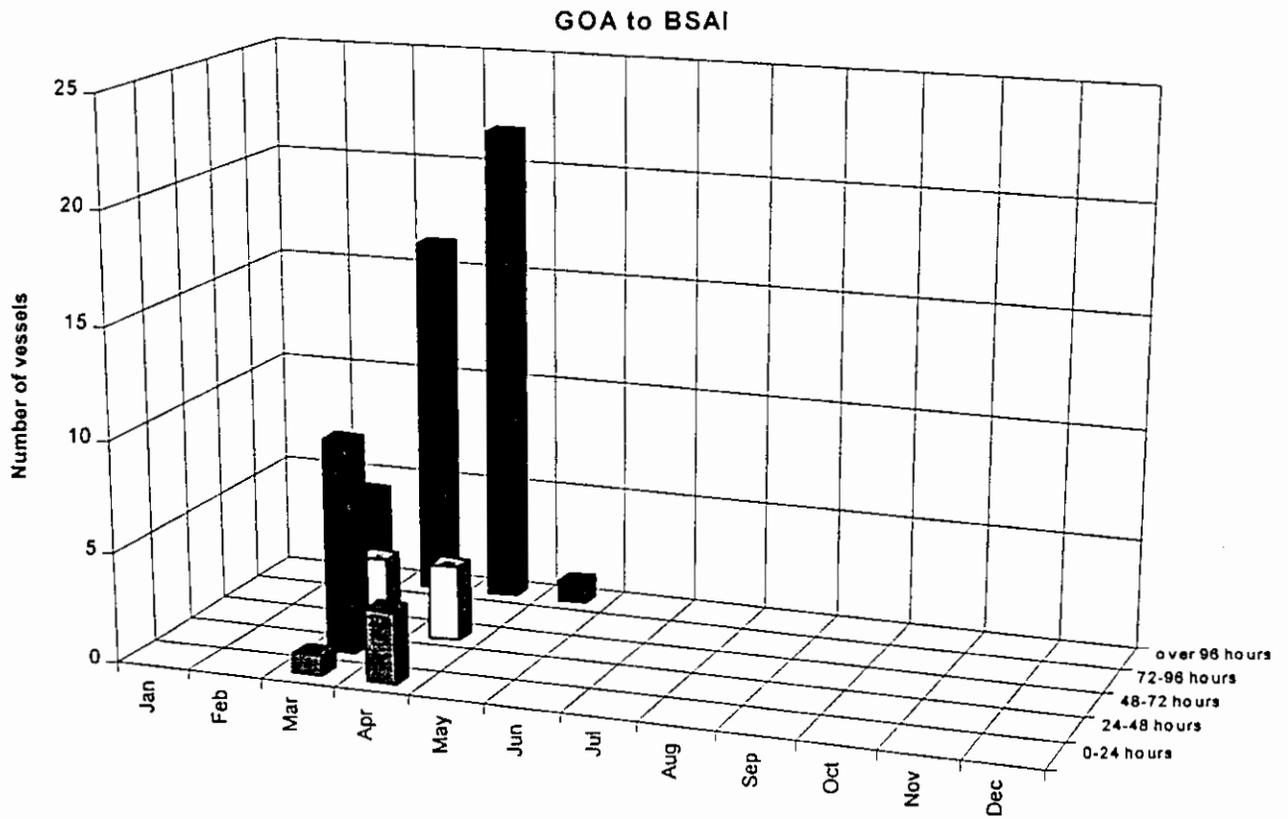
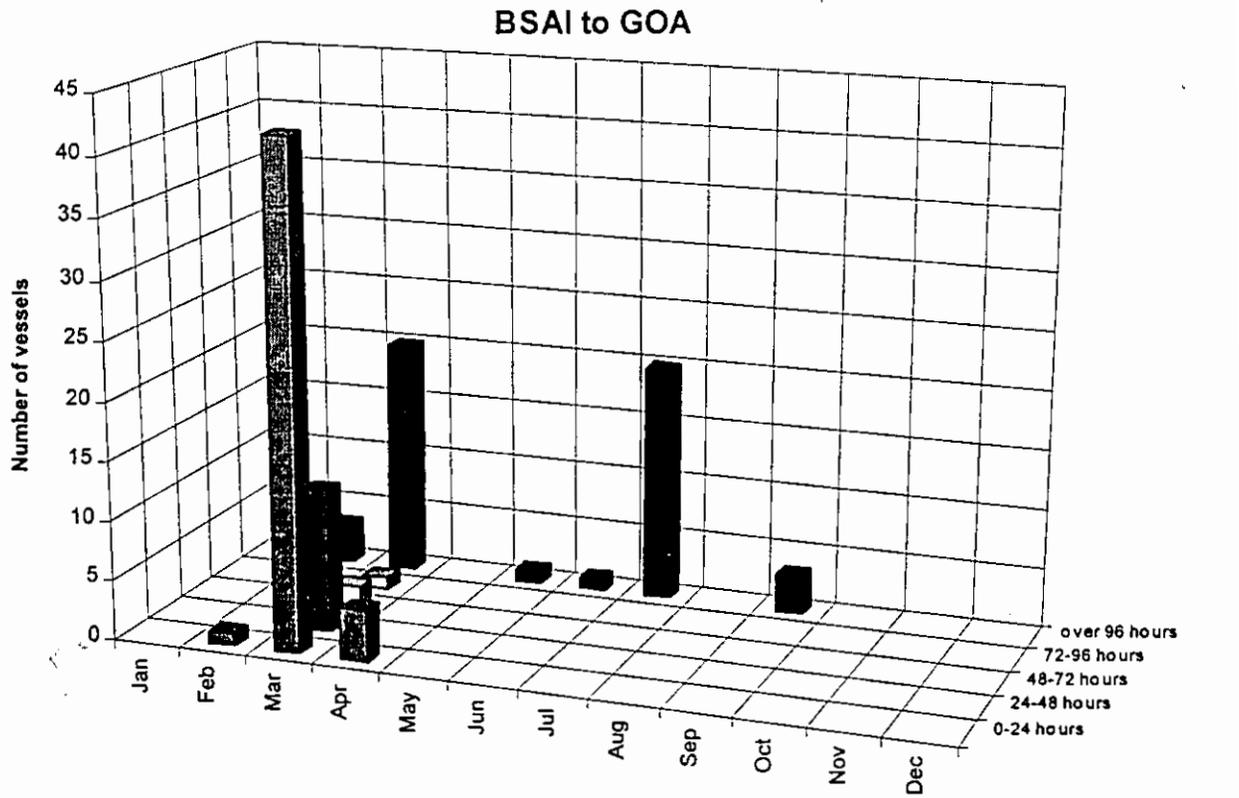


Figure 1. Estimated number of catcher vessels fishing with bottom trawl gear and transiting between the BSAI and GOA in 1997 by month and length of stand down period. Stand down period is measured from time of gear retrieval in one area to the time of gear deployment in the next area.

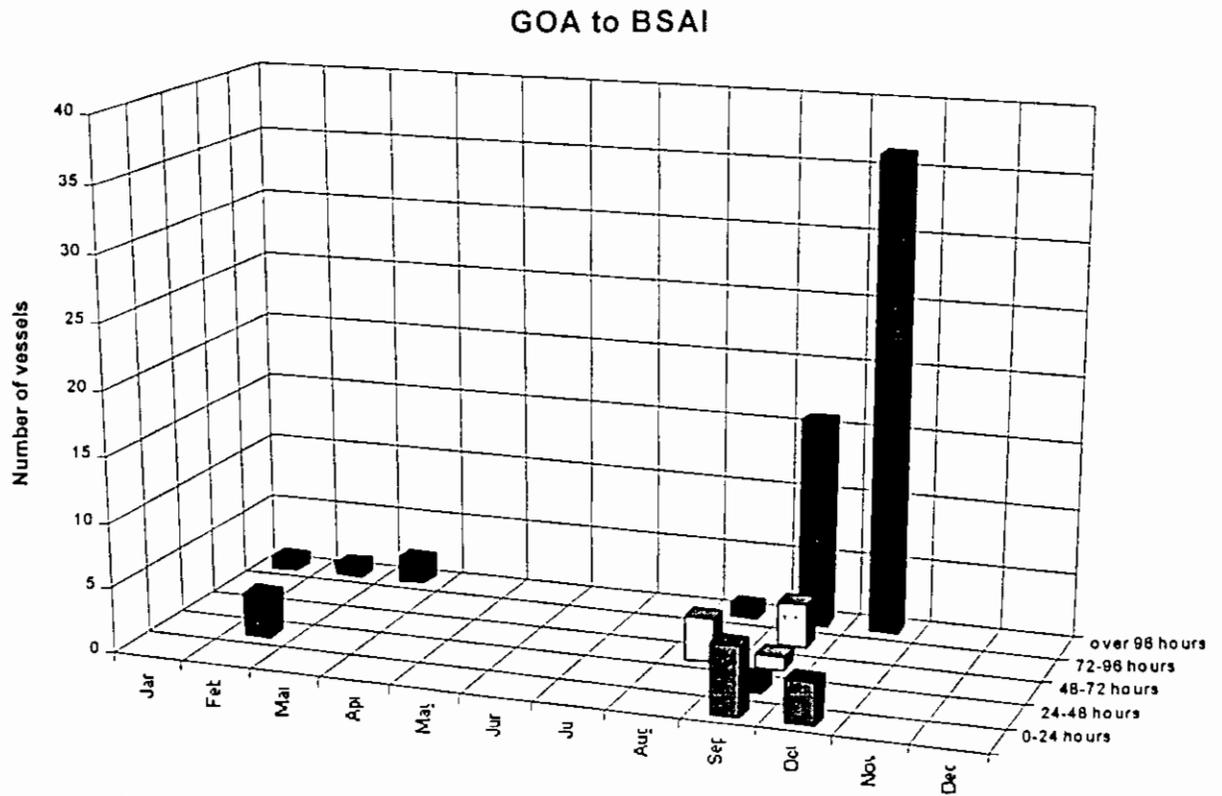
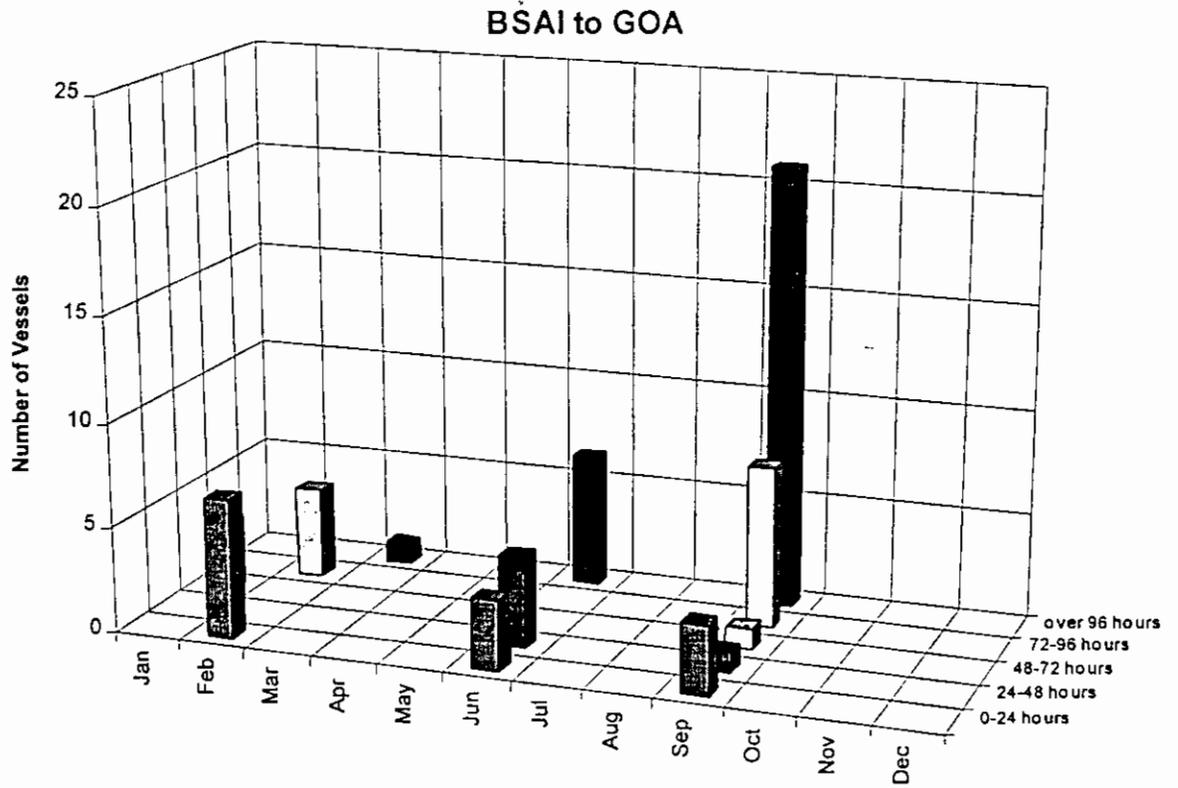


Figure 2. Estimated number of catcher vessels fishing with pelagic trawl gear and transiting between the BSAI and BSAI in 1997 by month and length of stand down period. Stand down period is measured from time of gear retrieval in one area to the time of gear deployment in the next area.

## **1.6 Implementation and Enforcement of a Stand Down Requirement for Vessels Transiting Between the BSAI and GOA**

Several options exist for the design of a stand down requirement for vessels transiting between the BSAI and GOA or vice versa including (1) determining the vessels and gear types to which such a provision would apply, (2) determining whether the stand down requirement would apply to specific target fisheries or all fishing activity (e.g., gear in the water), (3) determining the length of the stand down period, and (4) determining when the stand down period would begin and end.

### **1.6.1 Vessel and Gear Options**

**Option 1: Stand down requirement would apply to all groundfish vessels.** This option is the most broad sweeping and would encompass fixed gear vessels which have not in the past caused management difficulties due to rapid and unexpected shifts of effort between areas. In addition, longline and pot gear does not lend itself to rapid shifts in fishing activity from area to area because of the time and effort required to retrieve all of the fishing gear in one area and deploy it in the new area. Because vessels fishing with fixed gear are inherently less mobile than trawl vessels, and most fixed gear groundfish fisheries are slower paced, little reason exists to impose a stand down requirement on vessels fishing with fixed gear.

**Option 2: Stand down requirement would apply to trawl vessels only.** A stand down requirement imposed on all trawl vessels would encompass both catcher vessels and factory trawlers. While factory trawlers are highly mobile, NMFS has not faced the same level of difficulty in predicting shifts of effort between the BSAI and GOA in the factory trawl fleet as it has with the catcher vessel fleet. This is so, primarily because the most problematic fisheries in the Western GOA, pollock and Pacific cod, are allocated 100 percent and 90 percent, respectively, to the inshore sector. A number of small factory trawlers under 125 ft are included in the inshore sector but these vessels do not participate in directed fishing for pollock and do not represent enough fishing effort to create unpredictable management problems in the GOA Pacific cod fishery.

**Option 3: Stand down requirement would apply to trawl catcher vessels only.** This option is the least restrictive on the fleet in general, and most precisely directed at the vessels and fisheries that have posed the greatest management difficulties due to unpredictable shifts of effort into short term fisheries. This option would encompass all of the fisheries that have proven difficult to manage due to rapid and unpredictable shifts of effort, but would not impose unnecessary restrictions on fisheries that do not present management difficulties.

### **1.6.2 Target Fishery Options**

**Option 1: Stand down requirement would apply to all target fisheries.** This option would be the easiest to enforce and monitor. Enforcement officers could verify compliance by checking the time of gear retrieval and gear deployment in the vessel's daily fishing logbook. The numbers of catcher vessels switching between the BSAI and GOA in each month of 1997 as displayed on figures 2 and 3 suggests that a stand down requirement applied to all fishing activity (gear in the water) would primarily affect vessels participating in the pollock and Pacific cod fisheries in the BSAI and GOA.

**Option 2: Stand down requirement would apply to vessels engaged in directed fishing for pollock and Pacific cod only.** This option would pose greater enforcement difficulties than Option 1 because enforcement officers would be forced to determine the target or directed fishery in the previous area and

the target or directed fishery in the new area due to the possibility that a vessel could begin fishing in the new area at once but would be required to wait for a specified stand down period before beginning directed fishing on the specified species. On catcher vessels, a real time determination of target fisheries may be difficult or impossible for an enforcement officer to accomplish because it is not usually possible to determine the composition of catch in a vessel's fish holds at sea, especially on vessels that use refrigerated seawater holds.

**Conflicts with Improved Retention/Improved Utilization (IR/IU).** A stand down requirement that is limited to directed fishing for pollock and Pacific cod may be in conflict with the IR/IU program that was approved as Amendments 49/49 to the FMPs. If a vessel transiting between the BSAI and GOA is prohibited from directed fishing for pollock or Pacific cod but allowed to participate in other directed fisheries within the stand down period, then bycatch of pollock and Pacific cod becomes problematic. If the vessel operator is required to discard any pollock and Pacific cod in excess of the maximum retainable bycatch amount during the stand down period, such a requirement could increase regulatory discards of pollock and Pacific cod. In addition, vessels would be able to prospect for pollock or Pacific cod in the new area without standing down provided that they discard any catch in excess of the maximum retainable bycatch amount for that species. This outcome would be contrary to the objectives of the IR/IU program and Magnuson-Stevens Act mandates to reduce bycatch. If a stand down requirement is applied to all fishing activity, such conflicts with the IR/IU program would be avoided.

A vessel registration program also has the potential to produce conflicts with the IR/IU program if vessel operators who fail to register for a fishery find themselves forced to discard IR/IU species until their registration for a particular fishery becomes effective. The extent to which these various regulatory requirements will come into conflict is difficult to estimate at this point. However, care must be taken in the design and implementation of both a vessel registration program and a stand down requirement to prevent significant increases in regulatory discards.

### **1.6.3 Options for Length of Stand Down Period: 48, 72, or 96 hours**

The data displayed in Table 3 suggests that most rapid transits between the BSAI and GOA occur within 48 hours or take longer than 96 hours. Clearly, a 48-hour stand down period for vessels switching between the BSAI and GOA will eliminate some rapid shifts of effort that occurred in the 1997 September pollock fishery in both areas. However, the bulk of these transits took longer than 96 hours between time of gear retrieval and time of gear deployment as displayed in Figure 2. The most rapid shifts between the BSAI and GOA appeared to occur in March with vessels using bottom trawl gear. At that time, fishing for Pacific cod was open in both the BSAI and GOA. A cursory scan of the data suggests that several vessels may have been fishing along the line between the BSAI and GOA in places such as Unimak Pass and consequently, may have been moving back and forth across the line in the course of normal fishing activity. In 1997, the catcher vessel fishery for Pacific cod in the Bering Sea closed on April 29. In the GOA, the inshore Pacific cod fishery in area 610 closed on March 3, reopened for a one-day mop-up fishery on March 10 and closed again on March 11. In areas 620 and 630, the Pacific cod fishery closed on March 11. It appears that in 1997, many of the catcher vessels switching from the BSAI to the GOA and back in March did so to participate in this one-day mop-up fishery in area 610. Since Pacific cod remained open in the BSAI during this time, a 48 hour stand down requirement may have served to deter many of these vessels from crossing over to the GOA. However, the marginal difference between 48, 72, and 96 hour stand down requirements is difficult to predict.

#### 1.6.4 Options for Beginning and Ending of Stand Down Period

**Option 1: Stand down from time of gear retrieval in one area to time of gear deployment the new area.** This option would be simple to implement and enforce because enforcement officers will be able to use a vessel's existing daily fishing logbook to verify compliance. All vessels over 60 ft length overall (LOA) that are fishing for groundfish in the BSAI and GOA must report the time of gear deployment and gear retrieval for each tow within 2 hours in their daily fishing logbooks. These requirements do not extend to vessels under 60 ft LOA, however few trawl vessels in this size range are thought to venture between the BSAI and GOA.

**Option 2: Stand down period begins on the date of landing or transfer of all fish on board the vessel and ends 12:00 p.m. 2, 3, or 4 days after the date of delivery.** Catcher vessel operators are currently required to record in their daily fishing logbooks the date and time of each gear deployment and gear retrieval as well as the date (but not time) of each delivery. Under this option, the stand down period would begin on the date of landing or transfer of all fish on board the vessel and fishing could resume at 12:00 p.m. 2, 3, or 4 days after the date of delivery. Under this option, the actual stand down period for a vessel under the 48 hour option could range from 36 to 60 hours depending upon the exact time of landing or transfer. However, the 12 noon start time would be easily enforced. The purpose of requiring vessels to offload all fish caught in one area before deploying gear in the new area is to aid enforcement officers in determining whether a violation of the stand down requirement has occurred. If vessels were allowed to retain fish on board the vessel while transiting to a new area, enforcement officers boarding a vessel would have no means of determining whether the fish on board the vessel were old fish caught in the previous area, or new fish caught in the new area in violation of the stand down requirement. Requiring vessels to empty their holds before beginning the stand down period would eliminate this enforcement difficulty.

Any option that would start the stand down requirement on the date and time of a vessel's delivery (as opposed to simply the date of delivery) would entail a new collection of information requirement subject to OMB review under the Paperwork Reduction Act. Any stand down requirement that entails a new collection of information requirement and changes to daily fishing logbooks could not be approved and implemented prior to 1999.

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

An environmental assessment (EA) is required by the National Environmental Policy Act of 1969 (NEPA) to determine whether the action considered will result in significant impact on the human environment. If the action is determined not to be significant based on an analysis of relevant considerations, the EA and resulting finding of no significant impact (FONSI) would be the final environmental documents required by NEPA. An environmental impact statement (EIS) must be prepared for major Federal actions significantly affecting the human environment.

An EA must include a brief discussion of the need for the proposal, the alternatives considered, the environmental impacts of the proposed action and the alternatives, and a list of document preparers. The purpose and alternatives were discussed in Sections 1.1 and 1.2, and the list of preparers is in Section 6. This section contains the discussion of the environmental impacts of the alternatives including impacts on threatened and endangered species and marine mammals.

### **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 and scavengers, changes in the population structure of target fish stocks, and changes in the marine ecosystem community structure; (2) changes in the physical and biological structure of the marine environment as a result of fishing practices ( e.g., effects of gear use 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 annual groundfish total allowable catch 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 annual groundfish total allowable catch specifications.

### **2.2 Impacts on Endangered or Threatened Species**

**Background.** The ESA provides for the conservation of endangered and threatened species of fish, wildlife, and plants. The program is administered jointly by NMFS for most marine species, and the US Fish and Wildlife Service (FWS) for terrestrial and freshwater species.

The ESA procedure for identifying or listing imperiled species involves a two-tiered process, classifying species as either threatened or endangered, based on the biological health of a species. Threatened species are those likely to become endangered in the foreseeable future [16 U.S.C. § 1532(20)]. Endangered species are those in danger of becoming extinct throughout all or a significant portion of their range [16 U.S.C. § 1532(20)]. The Secretary, acting through NMFS, is authorized to list marine mammal and fish species. The Secretary of Interior, acting through the FWS, is authorized to list all other organisms.

In addition to listing species under the ESA, the critical habitat of a newly listed species must be designated concurrent with its listing to the “maximum extent prudent and determinable” [16 U.S.C. §1533(b)(1)(A)]. The ESA defines critical habitat as those specific areas that are essential to the conservation of a listed species and that may be in need of special consideration. The primary benefit of critical habitat designation is that it informs Federal agencies that listed species are dependent upon these areas for their continued existence, and that consultation with NMFS on any Federal action that may

affect these areas is required. Some species, primarily the cetaceans, listed in 1969 under the ESA and carried forward as endangered under the ESA, have not received critical habitat designations.

**Listed Species.** The following species are currently listed as endangered or threatened under the ESA and occur in the GOA and/or BSAI:

**Endangered**

Northern Right Whale	<i>Balaena glacialis</i>
Bowhead Whale <sup>1</sup>	<i>Balaena mysticetus</i>
Sei Whale	<i>Balaenoptera borealis</i>
Blue Whale	<i>Balaenoptera musculus</i>
Fin Whale	<i>Balaenoptera physalus</i>
Humpback Whale	<i>Megaptera novaeangliae</i>
Sperm Whale	<i>Physeter macrocephalus</i>
Snake River Sockeye Salmon	<i>Oncorhynchus nerka</i>
Short-tailed Albatross	<i>Diomedea albatrus</i>
Steller Sea Lion <sup>2</sup>	<i>Eumetopias jubatus</i>

**Threatened**

Snake River Fall Chinook Salmon	<i>Oncorhynchus tshawytscha</i>
Snake River Spring/Summer Chinook Salmon	<i>Oncorhynchus tshawytscha</i>
Steller Sea Lion <sup>3</sup>	<i>Eumetopias jubatus</i>
Spectacled Eider	<i>Somateria fishcheri</i>

**Section 7 Consultations.** Because both groundfish fisheries are federally regulated activities, any negative affects of the fisheries on listed species or critical habitat and any takings<sup>4</sup> that may occur are subject to ESA section 7 consultation. NMFS initiates the consultation and the resulting biological opinions are issued to NMFS. The Council may be invited to participate in the compilation, review, and analysis of data used in the consultations. The determination of whether the action “is likely to jeopardize the continued existence of” endangered or threatened species or to result in the destruction or modification of critical habitat, however, is the responsibility of the appropriate agency (NMFS or FWS). If the action is determined to result in jeopardy, the opinion includes reasonable and prudent measures that are necessary to alter the action so that jeopardy is avoided. If an incidental take of a listed species is expected to occur under normal promulgation of the action, an incidental take statement is appended to the biological opinion.

---

<sup>1</sup>species is present in Bering Sea area only.

<sup>2</sup>listed as endangered west of Cape Suckling.

<sup>3</sup>listed as threatened east of Cape Suckling.

<sup>4</sup> the term “take” under the ESA means “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct” (16 U.S.C. §1538(a)(1)(B)).

Section 7 consultations have been done for all the above listed species, some individually and some as groups. Below are summaries of the consultations.

**Endangered Cetaceans.** NMFS concluded a formal section 7 consultation on the effects of the BSAI and GOA groundfish fisheries on endangered cetaceans within the BSAI and GOA on December 14, 1979, and April 19, 1991, respectively. These opinions concluded that the fisheries are unlikely to jeopardize the continued existence or recovery of endangered whales. Consideration of the bowhead whale as one of the listed species present within the area of the Bering Sea fishery was not recognized in the 1979 opinion, however, its range and status are not known to have changed. No new information exists that would cause NMFS to alter the conclusion of the 1979 or 1991 opinions. NMFS has no plan to reopen Section 7 consultations on the listed cetaceans for this action or for the 1998 TAC specification process. Of note, however, are observations of Northern Right Whales during Bering Sea stock assessment cruises in the summer of 1997 (NMFS per. com). Prior to these sightings, and one observation of a group of two whales in 1996, confirmed sightings had not occurred.

**Steller sea lion.** The Steller sea lion range extends from California and associated waters to Alaska, including the Gulf of Alaska and Aleutian Islands, and into the Bering Sea and North Pacific and into Russian waters and territory. In 1997, based on biological information collected since the species was listed as threatened in 1990 (60 FR 51968), NMFS reclassified Steller sea lions as two distinct population segments under the ESA (62 FR 24345). The Steller sea lion population segment west of 144° W. longitude (a line near Cape Suckling, Alaska) is listed as endangered; the remainder of the U.S. Steller sea lion population maintains the threatened listing.

NMFS designated critical habitat in 1993 (58 FR 45278) for the Steller sea lion based on the Recovery Team's determination of habitat sites essential to reproduction, rest, refuge, and feeding. Listed critical habitats in Alaska include all rookeries, major haul-outs, and specific aquatic foraging habitats of the BSAI and GOA. The designation does not place any additional restrictions on human activities within designated areas. No changes in critical habitat designation were made as result of the 1997 re-listing.

Beginning in 1990 when Steller sea lions were first listed under the ESA, NMFS determined that both groundfish fisheries may adversely affect Steller sea lions, and therefore conducted Section 7 consultation on the overall fisheries (NMFS 1991), and subsequent changes in the fisheries (NMFS 1992). The most recent biological opinion on the BSAI and GOA fisheries effects on Steller sea lions was issued by NMFS on January 26, 1996. It concluded that these fisheries and harvest levels are unlikely to jeopardize the continued existence and recovery of the Steller sea lion or adversely modify critical habitat. NMFS conducted an informal Section 7 consultation on Steller sea lions for this action in 1997 and concluded that the GOA groundfish fishery and the 1997 TAC amounts were not likely to affect Steller sea lions in a way or to an extent not already considered in previous Section 7 consultations (NMFS, January 17, 1997). Reinitiation of formal consultation was not required at that time. NMFS reopened formal consultation on the 1998 fishery to evaluate new information specific to the 60 percent increase of pollock TAC in the combined W/C Regulatory Area. A supplementary Biological Opinion, to the 1996 Biological Opinion, was issued on March 2, 1998 that concluded that the pollock fishery in the W/C Regulatory Area was not likely to jeopardize the continued existence and recovery of the western population of Steller sea lions under a reapportionment of 10 percent of the pollock TAC from the third season (September) to the second season (June).

**Pacific Salmon.** No species of Pacific salmon originating from freshwater habitat in Alaska are listed under the ESA. These listed species originate in freshwater habitat in the headwaters of the Columbia (Snake) River. During ocean migration to the Pacific marine waters a small (undetermined) portion of

the stock extends into the Gulf of Alaska as far east as the Aleutian Islands. In that habitat they are mixed with hundreds to thousands of other stocks originating from the Columbia River, British Columbia, Alaska, and Asia. The listed fish are not visually distinguishable from the other, unlisted, stocks. Mortal take of them in the chinook salmon bycatch portion of the fisheries is assumed based on sketchy abundance, timing, and migration pattern information.

NMFS designated critical habitat in 1992 (57 FR 57051) for the Snake River sockeye, Snake River spring/summer chinook, and Snake River fall chinook salmon. The designations did not include any marine waters, and therefore, does not include any of the habitat where the groundfish fisheries are promulgated.

NMFS has issued two biological opinions and no-jeopardy determinations for listed Pacific salmon in the Alaska groundfish fisheries (NMFS 1994, NMFS 1995). Conservation measures were recommended to reduce salmon bycatch and improve the level of information about the salmon bycatch. The no jeopardy determination was based on the assumption that if total salmon bycatch is controlled, the impacts to listed salmon are also controlled. The incidental take statement appended to the second biological opinion allowed for take of one Snake River fall chinook and zero take of either Snake River spring/summer chinook or Snake River sockeye, per year. As explained above, it is not technically possible to know if any have been taken. Compliance with the biological opinion is stated in terms of limiting salmon bycatch per year to under 55,000 and 40,000 for chinook salmon, and 200 and 100 sockeye salmon in the BSAI and GOA fisheries, respectively.

**Short-tailed albatross.** The entire world population in 1995 was estimated as 800 birds; 350 adults breed on two small islands near Japan (H. Hasegawa, per. com.). The population is growing but is still critically endangered because of its small size and restricted breeding range. Past observations indicate that older short-tailed albatrosses are present in Alaska primarily during the summer and fall months along the shelf break from the Alaska Peninsula to the Gulf of Alaska, although 1- and 2-year old juveniles may be present at other times of the year (FWS 1993). Consequently, these albatrosses generally would be exposed to fishery interactions most often during the summer and fall--during the latter part of the second and the whole of the third fishing quarters.

Short-tailed albatrosses reported caught in the longline fishery include two in 1995, one in October 1996, and none so far in 1997. Both 1995 birds were caught in the vicinity of Unimak Pass and were taken outside the observers' statistical samples.

Formal consultation on the effects of the groundfish fisheries on the short-tailed albatross under the jurisdiction of the FWS concluded that BSAI and GOA groundfish fisheries would adversely affect the short-tailed albatross and would result in the incidental take of up to two birds per year, but would not jeopardize the continued existence of that species (FWS 1989). Subsequent consultations for changes to the fishery that might affect the short-tailed albatross also concluded no jeopardy (FWS 1995, FWS 1997). The US Fish and Wildlife Service does not intend renew consultation for this action.

**Spectacled Eider.** These sea ducks feed on benthic mollusks and crustaceans taken in shallow marine waters or on pelagic crustaceans. The marine range for spectacled eider is not known, although Dau and Kitchinski (1977) review evidence that they winter near the pack ice in the northern Bering Sea. Spectacled eider are rarely seen in U.S. waters except in August through September when they molt in northeast Norton Sound and in migration near St. Lawrence Island. The lack of observations in U.S. waters suggests that, if not confined to sea ice polynyas, they likely winter near the Russian coast (FWS

1993). Although the species is noted as occurring in the GOA and BSAI management areas no evidence that they interact with these groundfish fisheries exists.

**Conditions for Re-initiation of Consultation.** For all ESA listed species, consultation must be reinitiated if: the amount or extent of taking specified in the Incidental Take Statement is exceeded, new information reveals effects of the action that may affect listed species in a way not previously considered, the action is subsequently modified in a manner that causes an effect to listed species that was not considered in the biological opinion, or a new species is listed or critical habitat is designated that may be affected by the action.

**Impacts of the Alternatives on Endangered or Threatened Species.** None of the alternatives under consideration would affect the prosecution of the groundfish fisheries of the GOA and BSAI in a way not previously considered in the above consultations. The proposed alternatives are administrative in nature and are designed to improve the inseason management of certain groundfish fisheries. None of the alternatives would affect TAC amounts, PSC limits, or takes of listed species. Therefore, none of the alternatives are expected to have a significant impact on endangered, threatened, or candidate species.

### 2.3 Impacts on Marine Mammals

Marine mammals not listed under the ESA that may be present in the GOA and BSAI 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*).

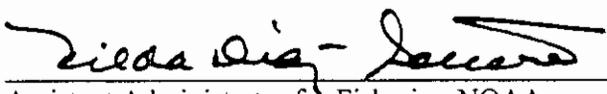
The proposed alternatives are administrative in nature and are designed to improve the inseason management of certain groundfish fisheries. None of the alternatives would affect TAC amounts, PSC limits, or takes of marine mammals. Therefore, none of the alternatives are expected to have a significant impact on marine mammals.

### 2.4 Coastal Zone Management Act

Implementation of 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.

### 2.5 Conclusions or Finding of No Significant Impact

None of the alternatives are likely to significantly affect the quality of the human environment, and the preparation of an environmental impact statement for the proposed action is not required by section 102(2)(C) of the National Environmental Policy Act or its implementing regulations.

  
for Assistant Administrator for Fisheries, NOAA

SEP | 1998  
Date

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

This section provides information about the economic and socioeconomic impacts of the alternatives including identification of the individuals or groups that may be affected by the action, the nature of these impacts, quantification of the economic impacts if possible, and discussion of the trade offs between qualitative and quantitative benefits and costs.

The requirements for all regulatory actions specified in E.O. 12866 are summarized in the following statement from the order:

In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environment, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.

This section also addresses the requirements of both E.O. 12866 and the RFA 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.

E. O. 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 above. The Regulatory Impact Review (RIR) is designed to provide information to determine whether the proposed regulation is likely to be “economically significant.” None of the alternatives is expected to result in a “significant regulatory action” as defined in E.O. 12866.

### **3.1 Economic Effects of Alternative 1: No Action**

Under Alternative 1, the groundfish fisheries of the BSAI and GOA would be managed unchanged. At times, available TACs or PSC limits are small enough that the fishery is kept closed to prevent risking an overrun of the TAC. At other times, when that risk is taken, small quotas are exceeded because unexpected effort materializes or CPUE exceeds expectations. In the former case, groundfish catch is foregone. In the latter, allowable catches are exceeded, at best resulting in discards of further catches and, at worst, overfishing of the stock.

### **3.2 Economic Effects of Alternative 2: Vessel Registration Program for Fisheries Which Meet Certain Criteria**

Under this alternative, NMFS would establish criteria to determine which fisheries would require pre-registration. Based on these criteria, NMFS would create a roster of "registration fisheries" that would be announced in the final specifications and supplemented on an inseason basis throughout the year. Criteria for establishing a pre-registration requirement for a fishery could include: (1) the size of the TAC amount or PSC limit specified for the fishery relative to the degree of interest in that fishery, (2) a fishery for which the TAC or PSC limit was exceeded by a significant amount in the previous year and the current year's quota and expected effort are similar, (3) a fishery for which the above two criteria may not apply but an expanded interest has developed inseason, and (4) a "mop-up" fishery.

The effects of this alternative on the fishing industry would be positive but difficult to quantify. The fleet as a whole would benefit if NMFS is able to manage "at risk" fisheries so that quotas are more fully harvested and the overhead costs associated with re-crewing and transiting to the fishing grounds for short term "mop-up" openings could be avoided. Individual vessels have, in the past, benefitted by being in the area at the time of a late re-opening in which they have benefitted from reduced competition for the balance of a quota. These vessels could face increased competition relative to the status quo, however, no one can be certain of reaping these "windfall" benefits. A pre-registration requirement would reduce the flexibility of vessel operators to enter and leave fisheries at will. In some cases, this could pose costs for certain operations if they realize at mid-course that would prefer to be participating in a short term fishery for which they have not pre-registered. Nevertheless, while a pre-registration requirement for certain "at risk" fisheries will increase the general bureaucratic burden on the fleet, it will serve to increase the ability of NMFS to manage such fisheries to obtain optimum yield and provide the greatest net benefit to the Nation.

**3.3 Economic Effects of Alternative 3 (PREFERRED): Stand Down Requirement for Catcher Vessels Transiting Between the BSAI and GOA**

The Councils preferred alternative would implement the following stand down requirements for trawl catcher vessels transiting between the BSAI and GOA:

IF YOU OWN OR OPERATE A CATCHER VESSEL AND FISH FOR GROUND FISH WITH TRAWL GEAR IN THE...	YOU ARE PROHIBITED FROM SUBSEQUENTLY DEPLOYING TRAWL GEAR IN THE....	UNTIL....
(1) BSAI while pollock or Pacific cod is open to directed fishing in the BSAI	Western and Central Regulatory Areas of the GOA	1200 hours A.l.t. on the third day after the date of landing or transfer of all groundfish on board the vessel harvested in the BSAI, unless you are engaged in directed fishing for Pacific cod in the GOA for processing by the offshore component.
(2) Western Regulatory Area of the GOA while pollock or inshore Pacific cod is open to directed fishing in the Western Regulatory Area of the GOA	BSAI	1200 hours A.l.t. on the third day after the date of landing or transfer of all groundfish on board the vessel harvested in the Western Regulatory Area of the GOA.
(3) Central Regulatory Area of the GOA while pollock or inshore Pacific cod is open to directed fishing in the Central Regulatory Area of the GOA.	BSAI	1200 hours A.l.t. on the second day after the date of landing or transfer of all groundfish on board the vessel harvested in the Central Regulatory Area of the GOA.

The effects of this alternative on the fishing industry would be largely distributional. Smaller operations in the GOA that may lack the size, capacity, or markets necessary to range widely between the BSAI and GOA would benefit to the extent that a greater percentage of the pollock and Pacific cod TACs would be reserved for local fishermen, provided that vessels that normally switch between the BSAI and GOA would choose to remain in one area. When both the BSAI and GOA are open for a particular species, the stand down requirement would be expected to provide a substantial incentive for vessels to avoid switching between areas in the manner that occurred in the 1997 pollock fishery in Area 610. However, when fisheries are only open in one area, such as during the July 1 pollock opening in the W/C Regulatory of the GOA, a stand down requirement of any length would not be expected to influence the activity of the fleet or impose any costs or benefits on specific participants in the fishery.

### 3.4 Economic Impacts on Small Entities

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.

The Small Business Administration 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 \$3,000,000 as small businesses. In addition, seafood processors with 500 employees or fewer, wholesale industry members with 100 employees or fewer, not-for-profit enterprises, and government jurisdictions with a population of 50,000 or less are considered small entities. NMFS has determined that 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 changed annual gross revenues by more than 5 percent, total costs of production by more than 5 percent, compliance costs for small entities by at least 10 percent compared with compliance costs as a percent of sales for large entities, or if 2 percent of the small entities affected by the regulation are forced out of business.

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

1. A 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. An 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 cash flow and liquidity, and ability of small entities to remain in the market.

The proposed stand down requirement would affect all trawl catcher vessels fishing for groundfish in the GOA and BSAI because it would restrict their ability to make rapid transits between the BSAI and GOA groundfish fisheries. Between 1992 and 1996, an average of 168 trawl catcher vessels fished for groundfish in the GOA and 107 trawl catcher vessels fished for groundfish in the BSAI. Thus, the universe of affected entities consists of 275 vessels, which are all considered small entities. It is impossible to predict how many, if any, of these vessels would choose to make a rapid transit this year. Based on NMFS data, 10-15 vessels made rapid transits in 1997 (see Table 1). Although data are not available to show whether these 10-15 vessels originated in the BSAI or GOA, practical and anecdotal considerations lead NMFS to believe that all are part of the BSAI fleet. In general, vessels based in the BSAI are more likely to make rapid transits to the GOA than vessels based in the GOA are to transit to the BSAI. This is because of the larger size and greater range of BSAI-based vessels, and because BSAI-based shore plants are closer to the dividing line between the BSAI and GOA making transits between areas easier. Therefore, the effects of any reduction in the ability of vessels to transit between areas is likely to provide additional harvest to GOA-based vessels and result in foregone harvest to BSAI-based vessels.

If we assume that the 10-15 vessels that made rapid transits in 1997 would have done so in 1998, then this rule would potentially have adverse economic impacts on 10-15 vessels, approximately 4-5 percent of the affected universe. However, it is possible that more than 10-15 vessels would have made rapid

transits this year. There is no way for NMFS to predict how many. If the stand down requirement had been in effect in 1997, and no BSAI-based vessels had chosen to transit to the GOA, NMFS projects that those 10-15 BSAI-based catcher vessels would have foregone harvest of 7,663 mt of pollock from the Western Regulatory Area of the GOA. NMFS does not have data on what these 10-15 vessel's annual gross revenues are and, therefore cannot calculate the exact effect of this loss as a percentage of gross annual revenue. In the absence of additional information, NMFS concludes that based on 1997 data, this reduction could amount to 5 percent or more of these vessels' gross annual revenues. By comparison, in 1997, the total fleet of BSAI-based catcher vessels harvested 370,381 mt of pollock from the BSAI. NMFS has no information about fishing alternatives that might be used by the 10-15 BSAI-based vessels to offset this reduction by operating in the BSAI during the pollock fishing season.

Because both BSAI and GOA pollock fisheries are fully utilized, the effects of this proposed action are entirely distributional. Any pollock not taken by BSAI-based vessels would be harvested by GOA-based vessels. If an estimated 10-15 BSAI-based vessels chose not to fish in the GOA in 1998 because of this new restriction, their foregone harvest could exceed 7,663 mt by an unknown amount because of the increased allowable catch for 1998 and possibly future years. It is assumed that the BSAI-based vessels chose to transit into the GOA because this fishing opportunity was important for their economic survival in a given year. This proposed restriction represents additional compliance costs and potential foregone harvests, which could result in more than a 5 percent reduction in future gross revenues for those BSAI-based vessels with a history of fishing in the GOA. The market for Alaska pollock could be met, in part, by the redistribution of catches by the GOA-based vessels, which could result in an additional negative economic impact to the BSAI-based vessels. No GOA-based vessels would be expected to transit to the BSAI to fish for pollock because of increased opportunities to harvest pollock in the GOA with less competition by BSAI-based vessels.

For these reasons, NMFS estimates it is possible that the proposed stand down requirement could reduce annual gross revenues for one or more of the BSAI-based catcher vessels that have fished for pollock in the GOA by more than 5 percent and /or increase total costs of production by more than 5 percent. No entity is expected to be forced out of business as a result of this action. Thus, it is possible that this action could result in a significant economic impact on a substantial number of small entities.

Alternatives to the stand down requirement that would minimize the significant economic impact include (1) reducing the length of the stand down period or (2) returning the action to the Council for reconsideration. Reducing the stand down period (e.g., from 72 to 48 hours for the Western Regulatory Area) would still require affected vessels to stand down and empty their holds, which could cause operational inefficiencies and enforcement difficulties. Returning the proposed action to the Council would eliminate any possibility of providing any action in 1998 that would preclude the possibility of exceeding the small quotas in the GOA by BSAI-based vessels as occurred in 1997.

#### 4.0 SUMMARY AND CONCLUSIONS

The problems and risks associated with managing short-term fisheries will continue to present themselves as long as NMFS does not have sufficient tools to project and manage fishing effort and catch per unit of effort in these fisheries. Under Alternative 3, NMFS would establish a stand down requirement for vessels transiting between the BSAI and GOA or vice versa. Under such a requirement, all vessels fishing for groundfish and transiting between the BSAI and GOA or vice versa would be required to stand down for 48, 72, or 96 hours from the time gear is retrieved in one area until the time gear is deployed in the new area. The most precisely targeted stand down requirement would be a program applied to trawl catcher vessels only. Little reason exists to impose a stand down requirement on catcher processors or vessels using fixed gear, which have not posed management difficulties in the past due to rapid shifts of effort. The most effective and easily enforced stand down requirement would be one that applies to all fishing regardless of target fishery and begins either at the time of gear retrieval or the date of delivery. Because NMFS does not currently require vessels to log their time of delivery, any stand down requirement linked to the time of delivery (as opposed to the date of delivery) would require changes to daily fishing logbooks and could not be implemented until 1999.

A stand down requirement limited to certain target fisheries, such as pollock and Pacific cod, could be difficult or impossible to enforce, could increase regulatory discards of these species, and could conflict with the objectives of the IR/IU program approved as Amendments 49/49 to the FMPs. Care must be taken in the design and implementation of a vessel stand down requirement to prevent inadvertent increases in regulatory discards.

In conclusion, NMFS has selected the option that best meets the conservation and management objectives of the FMPs while balancing considerations of the impacts on small entities.

## 5.0 REFERENCES

- Dau, C.P., and S.A. Kitchinski. 1977. Seasonal movements and distribution of the spectacled eider. *Wildfowl* 28:65-75.
- Fish and Wildlife Service (FWS). 1997. Letter from Ann G. Rappoport to Steven Pennoyer, February 19, 1997, on effects of the 1997 Total Allowable Catch Specifications and Environmental Assessment for groundfish fisheries in the Gulf of Alaska and Bering Sea-Aleutian Islands on short-tailed albatrosses. USDI FWS, 605 West 4th Avenue, Room 62, Anchorage, AK 99501.
- FWS. 1995. Endangered Species Act. Section 7. Reinitiation of Consultation on the Effects of the Groundfish Fisheries Conducted under the Bering Sea and Aleutian Islands and Gulf of Alaska Fishery Management Plans of the North Pacific Fishery Management Council. (Seabirds; amended Biological Opinion from July 3, 1989). USDI FWS, 605 West 4th Avenue, Room 62, Anchorage, AK 99501.
- FWS. 1993. Alaska Seabird Management Plan. Report of the US Fish and Wildlife Service. Anchorage. 102 pp.
- FWS. 1989. Endangered Species Act. Section 7 Consultation on the Effects of the Groundfish Fisheries Conducted under the Bering Sea and Aleutian Islands and Gulf of Alaska Fishery Management Plans of the North Pacific Fishery Management Council. (Seabirds; Biological Opinion.) USDI FWS, 605 West 4th Avenue, Room 62, Anchorage, AK 99501.
- National Marine Fisheries Service (NMFS). 1996. Endangered Species Act. Section 7. Biological Opinion--Fishery Management Plan for the Bering Sea and Aleutian Islands and Gulf of Alaska Groundfish Fisheries and the Total Allowable Catch Specification and its effects to Steller Sea Lions. NMFS Alaska Region, P.O. Box 21668, Juneau, Alaska, January 26, 1996.
- NMFS. 1995. Endangered Species Act. Section 7. Reinitiation of Consultation on the Effects of the Groundfish Fisheries Conducted under the Bering Sea and Aleutian Islands and Gulf of Alaska Fishery Management Plans of the North Pacific Fishery Management Council. (Pacific salmon; amended Biological Opinion from January 14, 1994) NMFS Northwest Region, 7600 Sand Point Way, NE, BIN 15700, Seattle, Washington, December 7, 1995.
- NMFS. 1994. Endangered Species Act Section 7. Biological Opinion--Pacific Salmon. Reinitiation of Consultation on the Effects of the Groundfish Fisheries Conducted under the Bering Sea and Aleutian Islands and Gulf of Alaska Fishery Management Plans of the North Pacific Fishery Management Council. (Pacific Salmon) NMFS Northwest Region, 7600 Sand Point Way, NE, BIN 15700, Seattle, Washington, January 14, 1994.
- NMFS. 1992. Endangered Species Act. Section 7. Biological Opinion--Amendment 18 to the Fishery Management Plan for the Groundfish Fishery of the Bering Sea and Aleutian Islands (Steller Sea Lions). NMFS Alaska Region, P.O. Box 21668, Juneau, Alaska, March 4, 1992.
- NMFS. 1991. Endangered Species Act. Section 7. Biological Opinion--Fishery Management Plan for the Bering Sea and Aleutian Islands and Gulf of Alaska Groundfish Fisheries and the Total Allowable Catch Specification and its effects to Steller Sea Lions. NMFS Alaska Region, P.O. Box 21668, Juneau, Alaska, April 18, 1991.

## 6.0 LIST OF PREPARERS

Kent Lind  
NMFS-Alaska Region