

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke
Executive Director



ESTIMATED TIME
4 HOURS

DATE: December 3, 1997

SUBJECT: Groundfish Amendments

ACTION REQUIRED

- (a) Initial review of Plan Amendments 52/52 for vessel pre-registration and 24-hr stand-down provision.
- (b) Initial review of amendments to streamline the TAC setting process: This agenda item has been deferred to a later meeting.
- (c) Initial review of an amendment to allocate shortraker/rougheye quota to fixed gear in the BSAI.

BACKGROUND

- (a) Vessel registration and 24-hr stand-down provision

In September 1997, the Council received a report from an industry committee formed to examine possible trip limits for western GOA pollock and Pacific cod fisheries. However, 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 formal 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 register in western and central GOA fisheries before they are allowed to participate. 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.

The following alternatives are considered in this analysis of Plan Amendments 52/52 (Item D-3(a)). Alternatives 2 and 3 are not mutually exclusive and may complement each other. Either or both alternatives could be adopted. However, the Council may wish to framework these types of management actions in the plan amendment and implement those listed below in a regulatory amendment to allow the Council and NMFS greater flexibility.

Alternative 1: No Action.

Alternative 2: Establish a vessel registration program for "at risk" fisheries which meet certain criteria.

Alternative 3: Establish a 48-hour stand down requirement for vessels transiting between specified BSAI and GOA fisheries.

(b) Streamline TAC setting process

NMFS has requested this subject be delayed until the February 1998 meeting.

(c) Allocation of Shortraker/rougheye TAC in the BSAI -- Proposed Amendment 53

Shortraker/rougheye rockfish in the Aleutian Islands subarea typically are closed to directed fishing at the beginning of the fishing year because the full TAC amount is needed as bycatch in other fisheries. Unfortunately, bycatch rates were higher than anticipated in 1997, and fisheries that take these species as bycatch were closed to prevent reaching the overfishing level. The closure of these fisheries resulted in foregone opportunity to harvest available groundfish TACs and the threat of closure of the sablefish IFQ fishery. These series of events prompted the Council to request staff to develop an analysis of reduced maximum retainable bycatch (MRB) percentages and gear allocations for shortraker/rougheye rockfish. At its September 1997 meeting, the Council voted to establish a separate MRB percentage for shortraker/rougheye of 7 percent relative to deepwater species (rockfish species, sablefish, Greenland turbot, and flathead sole) and 2 percent relative to all other species except arrowtooth flounder, which cannot be used as a species against which shortraker/rougheye may be retained.

At this meeting, the Council will make an initial review of an analysis for an allocation of shortraker/rougheye between vessels using trawl and non-trawl gear. Two separate management alternatives are considered:

Alternative 1: Status Quo. The shortraker/rougheye rockfish TAC would not be allocated between gear groups. MRB constraints would be the only management tool in place to reduce bycatch rates and bycatch amounts in the trawl fisheries would continue to threaten fixed gear fisheries with closures if overall bycatch amounts exceed TAC and result in overfishing concerns.

Alternative 2: The shortraker/rougheye rockfish TAC would be allocated between vessels using trawl and non trawl gear. Options for gear allocations as follows:

- 30 percent to non trawl gear/70 percent to trawl gear - Industry recommendation
- 20 percent to non trawl gear/80 percent to trawl gear - Historical catch distribution

Sue Salvesson will be on hand to discuss potential impacts of these alternatives. The executive summary for this amendment is attached.

Executive Summary

This Environmental Assessment/Regulatory Impact Review (EA/RIR) addresses alternatives for allocating shortraker/rougheye rockfish (SR/RE) between vessels using trawl and non trawl gear in the Aleutian Islands subarea. This action, if adopted by the Council, would be implemented under Amendment 53 to the FMP for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area. A draft EA/RIR prepared for the adjustment of the maximum retainable bycatch (MRB) percentage of SR/RE (Ackley et al, 1997) is incorporated into this document by reference.

In 1997, inseason monitoring and management of AI fisheries were frustrated by unanticipated high harvest rates of shortraker/rougheye in the Pacific ocean perch and Atka mackerel trawl fisheries. These higher than anticipated catch rates resulted in harvest amounts that exceeded ABC and TAC. Bycatch estimates of SR/RE through mid 1997 indicated that the overfishing level would be reached if all fisheries that took these species were not closed. As a result, NMFS prohibited the retention of Atka mackerel, Pacific cod, and rockfish by vessels using trawl gear and retention of Pacific cod by hook-and-line vessels in the Aleutian Islands subarea. The directed fishery for Greenland turbot by vessels using hook-and-line gear also was closed. If necessary, NMFS was prepared to close the Individual Fishing Quota fishery for sablefish to prevent overfishing of SR/RE. Thus, although overfishing concerns stemmed primarily from the bycatch of SR/RE in the POP and Atka mackerel trawl fisheries, lucrative nontrawl fisheries that also take incidental amounts of these rockfish also were closed, or threatened with closure, to prevent reaching the overfishing level. These overfishing closures disrupted fishing plans and created a loss of economic opportunity for both the trawl and nontrawl fishing industry.

Concerns about the overall management of the SR/RE TAC, as well as trawl and nontrawl industry frustration about actual or potential fishery closures resulting from overfishing concerns prompted the Council to take several actions at its June and September 1997 meetings. First, the Council requested that options to reduce the maximum retainable bycatch (MRB) percentages for SR/RE be explored to minimize the impact that "topping" behavior may have on the rapid rate that SR/RE TAC is reached. "Topping off" occurs when vessel operators alter fishing operations to catch more SR/RE than they otherwise would so that their retained catch of these species may be maximized under MRB constraints. An analysis was prepared on alternative reductions of the MRB percentage (Ackley et al., 1997) and presented to the Council at its September 1997 meeting. Based on the analysis, the Council voted to establish a separate MRB percentage for SR/RE of 7 percent relative to deepwater species (rockfish species, sablefish, Greenland turbot, and flathead sole) and 2 percent relative to all other species except arrowtooth flounder, which cannot be used as a species against which SR/RE may be retained.

NMFS has initiated rulemaking to implement the Council's recommended action and anticipates that a proposed rule will be published for public comment and review in December 1998. If approved by NMFS, the MRB percentage for SR/RE would be effective by March 1998. These percentages are intended to reduce the incentive to top off target catch with SR/RE while minimizing the potential for regulatory discards of SR/RE during a fishing trip. The catch rates of SR/RE should decrease accordingly. Nonetheless, overall bycatch amounts still could pose concern given the small TAC amounts annually specified for SR/RE and the high volume POP and Atka mackerel trawl fisheries in the AI.

At its June 1997 meeting the Council also noted that other management measures may be considered in the future to address the competitive use of SR/RE bycatch in trawl and non trawl fisheries, including gear allocations. At its September 1997 meeting, the Council reiterated its request to staff to develop an analysis for an allocation of SR/RE between vessels using trawl and non-trawl gear to more directly respond to concerns by fixed gear groups that trawl bycatch of SR/RE could continue to result in closures of fixed gear fisheries. Although the proposed MRB percentage for SR/RE would reduce trawl bycatch rates to the extent that incentives

are reduced to trawl vessel operators to top off their catch of POP or Atka mackerel with SR/RE, the potential still exists that overall bycatch amounts may exceed TAC and force closures of fixed gear fisheries. In general, representatives of the trawl and fixed gear industry supported an allocation of SR/RE between gear groups and recommended to the Council that 70 percent of the TAC be allocated to vessels using trawl gear and 30 percent of the TAC be allocated to vessels using non-trawl gear.

Two separate management alternatives are considered:

Alternative 1: Status Quo

The SR/RE TAC would not be allocated between gear groups. MRB constraints would be the only management tool in place to reduce bycatch rates and bycatch amounts in the trawl fisheries would continue to threaten fixed gear fisheries with closures if overall bycatch amounts exceed TAC and result in overfishing concerns.

Alternative 2: The SR/RE TAC would be allocated between vessels using trawl and non trawl gear. Options for gear allocations as follows:

- 30 percent to non trawl gear/70 percent to trawl gear - Industry recommendation
- 20 percent to non trawl gear/80 percent to trawl gear - Historical catch distribution

An analysis of observer data indicated that bycatch of SR/RE is highest in the trawl POP fishery, and in the Atka Mackerel trawl fishery. Of the total observed shortraker/rougheye bycaught in 1995 and 1996, 20.5% and 10.1% were taken in longline fisheries in each year, respectively. NMFS's best blend estimate of SR/RE catch shows a distribution between trawl and nontrawl fisheries that is similar to that indicated by observer data. In 1995 and 1996, trawl gear fisheries accounted for 82 percent and 80 percent of the SR/RE catch, respectively. Conversely, hook-and-line gear fisheries accounted for 18 percent and 20 percent of the catch in each respective year. In 1997, however, the rockfish and Atka mackerel trawl fisheries accounted for 91 percent of the SR/RE catch and the hook-and-line gear fisheries for 9 percent.

Only vessels that fish for groundfish in the Aleutian Islands subarea of the BSAI would be affected by the proposed allocation of SR/RE between vessels using trawl and nontrawl gear. In 1996, 90 trawl vessels and 123 nontrawl vessels fished for groundfish in the AI subarea. Of these, 15 trawl catcher/processor vessels retained SR/RE, most of them while participating in either the POP or Atka mackerel fishery. Also in 1996, 16 freezer longline vessels retained SR/RE while participating in either the Pacific cod, sablefish, or Greenland turbot fishery. Based on 1996 ADF&G fish ticket data, 48 catcher vessels delivered SR/RE to shoreside processors, although landed amounts were small (3,000 lbs) relative to the 1996 C/P retained catch (about 750 mt).

The reported exvessel price for SR/RE ranges from \$1.10 per pound for fixed gear operations to \$1.80 per pound for at-sea trawl processing operations. Using these prices, the total value of the 1996 shortraker/rougheye retained by fixed gear fisheries is estimated at \$ 247,356, of which \$3,300 is attributed to catcher vessels landing shoreside. The estimated value of the SR/RE retained by trawl vessels is estimated at \$ 2.9 million.

Under either Alternatives 1 or 2, the potential foregone harvest opportunity to trawl and fixed gear vessels that are prevented from fishing for other species to prevent overfishing of SR/RE would vary depending on the fishery and foregone harvest amount. The 1996 total estimated exvessel value of AI subarea groundfish retained by trawl vessels was \$ 43.8 million. The value of AI groundfish retained by fixed gear vessel during 1996 was about \$ 9.2 million (Table 8). Under alternative 2, the potential for SR/RE bycatch in the trawl fisheries resulting in closure or peremption of nontrawl fisheries is eliminated.

A significant negative economic impact on the catcher vessels that retain SR/RE is not likely as a result of the proposed action given the small amounts of these rockfish species that have been retained by catcher vessels fishing in the AI subarea in past years (3,000 lbs in 1996 worth an estimated \$ 3,300). Conversely, the proposed action is expected to have a positive impact to the extent that bycatch in the trawl fisheries may be managed more effectively without impacting other gear groups. Given the above assessment, NMFS has determined that the proposed action would not result in a negative "significant impact" on small entities because it would not reduce annual gross revenues by more than 5 percent, increase total costs of production by more than 5 percent, or result in compliance costs for small entities that are at least 10 percent higher than compliance costs as a percent of sales for large entities. As a result, a regulatory flexibility analysis was not prepared.

None of the alternatives is expected to result in a "significant regulatory action" as defined in E.O. 12866.

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.

DRAFT FOR COUNCIL REVIEW

ENVIRONMENTAL ASSESSMENT/REGULATORY IMPACT REVIEW

FOR

AMENDMENT 52 TO THE FISHERY MANAGEMENT PLAN FOR THE GROUND FISH FISHERY OF
THE BERING SEA AND ALEUTIAN ISLANDS AREA AND AMENDMENT 52 TO THE FISHERY
MANAGEMENT PLAN FOR GROUND FISH OF THE GULF OF ALASKA

TO ESTABLISH

A VESSEL REGISTRATION PROGRAM FOR SHORT TERM FISHERIES AND/OR A 48-HOUR
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

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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 the Groundfish Fisheries 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 developed 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 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 addresses Amendments 52/52 to the FMPs which would establish a vessel registration program for short term fisheries and/or a 48-hour stand down requirement for vessels transiting between the BSAI and GOA.

1.1 Purpose of and Need for the Action

"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 (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 catch per unit effort (CPUE). 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 forgone, 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 Gulf of Alaska 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 perceived problem. 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.

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: 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 in the final specifications and supplemented 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 in mid-1998 with the pollock and Pacific

cod fisheries of the western and central GOA. 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: Establish a 48-hour stand down requirement for vessels transiting between the BSAI and GOA. 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 hours from the time gear is retrieved in one area until the time gear is deployed in the new area. Alternatively, the 48-hour stand down requirement could be limited to vessels transiting between specified BSAI and GOA target fisheries such as pollock and Pacific cod.

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 crossover to the GOA to participate in this fishery. The disposition of pollock catch from area 610 since 1992 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 GOA-based shore plants and 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.

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

<i>Year</i>	<i>BSAI¹</i>	<i>GOA²</i>	<i>At-sea³</i>	<i>Total</i>
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

¹Includes shore-based processors in Dutch Harbor and Akutan

²Includes shore-based processors in Sand Point, King Cove, and Kodiak

³Includes factory trawlers, factory longliners, and floating processors.

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 closure for the fishery effective September 7, 1997. Once the closure date was announced, a large influx of Bering Sea-based vessels entered the GOA to participate in the final two days of the fishery and these vessels harvested approximately 7,000 mt of pollock from Area 610 in the final two 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.

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

<i>Year</i>	<i>BSAI¹</i>	<i>GOA²</i>	<i>At-sea³</i>	<i>Total</i>
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

¹Includes shore-based processors in Dutch Harbor and Akutan

²Includes shore-based processors in Sand Point, King Cove, and Kodiak

³Includes inshore catcher/processers and inshore floating processors.

Until March 3, 1997, catcher vessels based in the Bering Sea had not participated in the Pacific cod fishery in Area 610 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 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 safely 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 would require: (1) establishment of criteria to determine which fisheries would require pre-registration, (2) designing procedures for registering vessels intending to participate in registration fisheries, and (3) establishing penalties for non-compliance with the registration program.

1.4.1 Criteria for Determining which Fisheries would Require Pre-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 could be announced as part of the final harvest specifications. 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 be registered in only 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 and comply with.

A vessel registration program must also 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. Nevertheless, such a system could be in place by mid-1998 for GOA pollock fisheries.

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.

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 civil and criminal penalty provisions and civil forfeiture provisions of the Magnuson Act, and to other applicable law. The Magnuson Act provides several enforcement remedies for violations including:

1. Issuance of a citation (a type of warning), usually at the scene of the offense.
2. Assessment by the Administrator of a civil money penalty.
3. Permit sanctions.
4. For certain violations, judicial forfeiture action against the vessel and its catch.
5. Criminal prosecution of the owner or operator for some offenses.

It is the policy of NMFS to enforce vigorously and equitably the provisions of the Magnuson Act by utilizing that form or combination of authorized remedies best suited in a particular case to this end. Processing a case under one remedial form usually means that other remedies are inappropriate in that case. However, further investigation or later review may indicate the case to be either more or less serious than initially considered, or may otherwise reveal that the penalty first pursued is inadequate to serve the purposes of the Magnuson Act. Under such circumstances, NMFS may pursue other remedies either in lieu of or in addition to the action originally taken. Forfeiture of the illegal catch does not fall within this general rule and is considered in most cases as only the initial step in remedying a violation by removing the ill-gotten gains of the offense.

1.5 Implementation and Enforcement of a 48-hour Stand Down Requirement

Several options exist for the design of 48-hour stand down requirement for vessels transiting between the BSAI and GOA or vice versa including (1) determining to which fisheries such a provision would apply and, (2) determining when the 48-hour stand down period would begin and end.

Affected fisheries and gear types. A 48-hour stand down requirement could be applied to all groundfish vessels transiting between groundfish fisheries in the BSAI and GOA and vice versa, or it could be restricted to specific target fisheries such as pollock and Pacific cod and/or specific gear types. If the 48-hour stand down requirement is restricted to specific fisheries, implementation and enforcement of the program would be more complex due to the possibility that a vessel could begin fishing in the new area at once but would be required to wait for 48 hours before beginning directed fishing on the specified species. Enforcement of such a provision would require monitoring a vessel's retained catch composition to determine if the retained catch of the species in question exceeds the maximum retainable bycatch amount in effect for that species. For this

reason, a 48-hour stand down requirement limited to certain target fisheries would be difficult or impossible to enforce, especially on unobserved catcher vessels.

Conflicts with Improved Retention/Improved Utilization (IR/TU). A 48-hour stand down requirement that is limited to directed fishing for pollock and Pacific cod may be in conflict with the IR/TU program that was approved as Amendments 49/49 to the FMP. 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 48-hour 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. This outcome would be contrary to the objectives of the IR/TU program and Magnuson-Stevens Act mandates to reduce bycatch. If a 48-hour stand down requirement is applied to all species, such conflicts with the IR/TU program would be avoided.

A vessel registration program also has the potential to produce conflicts with the IR/TU program if vessel operators who fail to register for a fishery find themselves forced to discard IR/TU 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.

Timing the 48-hour stand down period. The 48-hour stand down period could begin at the time of last gear retrieval in one area and would be measured to the time of first gear deployment in the new management area. Alternatively, the 48-hour stand down period could begin after delivery of all fish harvested in an area, and vessels would be required to return to port and offload before transiting between the BSAI and GOA. The latter option would be substantially more restrictive.

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 Endangered Species Conservation Act 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 ¹	<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 ²	<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 ³	<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 takings⁴ 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.

¹species is present in Bering Sea area only.

²listed as endangered in waters west of Cape Suckling.

³listed as threatened in waters east of Cape Suckling.

⁴ 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 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 has no plan to reopen Section 7 consultations on Steller sea lions for this action or the 1998 TAC specification process.

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 go 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, 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 to renew consultation for this action or the 1998 TAC specification process.

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 polyneas, 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.

Assistant Administrator for Fisheries, NOAA

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 Regulatory Flexibility Act to provide adequate information to determine whether an action is "significant" under E.O. 12866 or will result in "significant" impacts on small entities under the RFA.

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 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 forgone, 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 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: 48-hour Stand Down Requirement for Vessels Transiting Between Specified BSAI and GOA Fisheries

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 hours from the time gear is retrieved in one area until the time gear is deployed in the new area. Alternatively, the 48-hour stand down requirement could be limited to vessels transiting between specified BSAI and GOA target fisheries such as pollock and Pacific cod.

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 chose to remain in one area. When both the BSAI and GOA are open for a particular species, the 48-hour stand down

requirement would provide a significant incentive for vessels to avoid switching between areas as occurred in the 1997 pollock fishery in Area 610.

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, or compliance costs for small entities by at least 10 percent compared with compliance costs as a percent of sales for large entities.

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

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

Alternatives 2 and 3 would affect vessels participating in certain critical fisheries including the pollock fisheries of the GOA. However, the vessels participating in the pollock fisheries of the GOA compose less than 20 percent of groundfish vessels fishing in Alaska. In addition, none of the alternatives would reduce annual gross revenues for these vessels by more than 5 percent, increase total costs of production by more than 5 percent, or increase compliance costs for small entities by at least 10 percent compared with compliance costs as a percent of sales for large entities. Therefore, an initial regulatory flexibility analysis was not prepared.

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 CPUE in these fisheries. Amendments 52/52 would authorize NMFS to establish a vessel registration program for "at risk" fisheries and/or would authorize NMFS to establish a stand down period for groundfish vessels transiting between the BSAI and GOA or vice versa.

Under Alternative 2, vessel operators would be required to register with NMFS a certain number of days before beginning directed fishing in specified registration fisheries. The vessel registration program could begin in mid-1998 with the pollock and Pacific cod fisheries of the western and central GOA. 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 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 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 registered. Nevertheless, while a 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.

Under Alternative 3, NMFS would establish a 48-hour 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 hours from the time gear is retrieved in one area until the time gear is deployed in the new area. Alternatively, the 48-hour stand down requirement could be limited to vessels transiting between specified BSAI and GOA target fisheries such as pollock and Pacific cod. However, a stand down requirement limited to certain fisheries such as pollock and Pacific cod could be difficult or impossible to enforce, and could lead to an increase in regulatory discards of these species and could be in conflict with the objectives of the IR/TU program approved as Amendments 49/49 to the FMPs. Care must be taken in the design and implementation of both a vessel registration program and a vessel stand down requirement to prevent a significant increase in regulatory discards.

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DRAFT ENVIRONMENTAL ASSESSMENT/REGULATORY IMPACT REVIEW
FOR AMENDMENT 53 TO THE
FISHERY MANAGEMENT PLAN
FOR THE
GROUND FISH FISHERY OF THE BERING SEA AND ALEUTIAN ISLANDS AREA

ALLOCATE SHORTRAKER/ROUGHEYE ROCKFISH
IN THE ALEUTIAN ISLANDS SUBAREA
BETWEEN VESSELS USING TRAWL AND NONTRAWL GEAR

Prepared by staff of the
Alaska Department of Fish and Game
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Executive Summary

This Environmental Assessment/Regulatory Impact Review (EA/RIR) addresses alternatives for allocating shortraker/rougheye rockfish (SR/RE) between vessels using trawl and non trawl gear in the Aleutian Islands subarea. This action, if adopted by the Council, would be implemented under Amendment 53 to the FMP for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area. A draft EA/RIR prepared for the adjustment of the maximum retainable bycatch (MRB) percentage of SR/RE (Ackley et al, 1997) is incorporated into this document by reference.

In 1997, inseason monitoring and management of AI fisheries were frustrated by unanticipated high harvest rates of shortraker/rougheye in the Pacific ocean perch and Atka mackerel trawl fisheries. These higher than anticipated catch rates resulted in harvest amounts that exceeded ABC and TAC. Bycatch estimates of SR/RE through mid 1997 indicated that the overfishing level would be reached if all fisheries that took these species were not closed. As a result, NMFS prohibited the retention of Atka mackerel, Pacific cod, and rockfish by vessels using trawl gear and retention of Pacific cod by hook-and-line vessels in the Aleutian Islands subarea. The directed fishery for Greenland turbot by vessels using hook-and-line gear also was closed. If necessary, NMFS was prepared to close the Individual Fishing Quota fishery for sablefish to prevent overfishing of SR/RE. Thus, although overfishing concerns stemmed primarily from the bycatch of SR/RE in the POP and Atka mackerel trawl fisheries, lucrative nontrawl fisheries that also take incidental amounts of these rockfish also were closed, or threatened with closure, to prevent reaching the overfishing level. These overfishing closures disrupted fishing plans and created a loss of economic opportunity for both the trawl and nontrawl fishing industry.

Concerns about the overall management of the SR/RE TAC, as well as trawl and nontrawl industry frustration about actual or potential fishery closures resulting from overfishing concerns prompted the Council to take several actions at its June and September 1997 meetings. First, the Council requested that options to reduce the maximum retainable bycatch (MRB) percentages for SR/RE be explored to minimize the impact that "topping" behavior may have on the rapid rate that SR/RE TAC is reached. "Topping off" occurs when vessel operators alter fishing operations to catch more SR/RE than they otherwise would so that their retained catch of these species may be maximized under MRB constraints. An analysis was prepared on alternative reductions of the MRB percentage (Ackley et al., 1997) and presented to the Council at its September 1997 meeting. Based on the analysis, the Council voted to establish a separate MRB percentage for SR/RE of 7 percent relative to deepwater species (rockfish species, sablefish, Greenland turbot, and flathead sole) and 2 percent relative to all other species except arrowtooth flounder, which cannot be used as a species against which SR/RE may be retained.

NMFS has initiated rulemaking to implement the Council's recommended action and anticipates that a proposed rule will be published for public comment and review in December 1998. If approved by NMFS, the MRB percentage for SR/RE would be effective by March 1998. These percentages are intended to reduce the incentive to top off target catch with SR/RE while minimizing the potential for regulatory discards of SR/RE during a fishing trip. The catch rates of SR/RE should decrease accordingly. Nonetheless, overall bycatch amounts still could pose concern given the small TAC amounts annually specified for SR/RE and the high volume POP and Atka mackerel trawl fisheries in the AI.

At its June 1997 meeting the Council also noted that other management measures may be considered in the future to address the competitive use of SR/RE bycatch in trawl and non trawl fisheries, including gear allocations. At its September 1997 meeting, the Council reiterated its request to staff to develop an analysis for an allocation of SR/RE between vessels using trawl and non-trawl gear to more directly respond to concerns by fixed gear groups that trawl bycatch of SR/RE could continue to result in closures of fixed gear fisheries. Although the proposed MRB percentage for SR/RE would reduce trawl bycatch rates to the extent that incentives

are reduced to trawl vessel operators to top off their catch of POP or Atka mackerel with SR/RE, the potential still exists that overall bycatch amounts may exceed TAC and force closures of fixed gear fisheries. In general, representatives of the trawl and fixed gear industry supported an allocation of SR/RE between gear groups and recommended to the Council that 70 percent of the TAC be allocated to vessels using trawl gear and 30 percent of the TAC be allocated to vessels using non-trawl gear.

Two separate management alternatives are considered:

Alternative 1: Status Quo

The SR/RE TAC would not be allocated between gear groups. MRB constraints would be the only management tool in place to reduce bycatch rates and bycatch amounts in the trawl fisheries would continue to threaten fixed gear fisheries with closures if overall bycatch amounts exceed TAC and result in overfishing concerns.

Alternative 2: The SR/RE TAC would be allocated between vessels using trawl and non trawl gear. Options for gear allocations as follows:

- 30 percent to non trawl gear/70 percent to trawl gear - Industry recommendation
- 20 percent to non trawl gear/80 percent to trawl gear - Historical catch distribution

An analysis of observer data indicated that bycatch of SR/RE is highest in the trawl POP fishery, and in the Atka Mackerel trawl fishery. Of the total observed shortraker/rougeye bycaught in 1995 and 1996, 20.5% and 10.1% were taken in longline fisheries in each year, respectively. NMFS's best blend estimate of SR/RE catch shows a distribution between trawl and nontrawl fisheries that is similar to that indicated by observer data. In 1995 and 1996, trawl gear fisheries accounted for 82 percent and 80 percent of the SR/RE catch, respectively. Conversely, hook-and-line gear fisheries accounted for 18 percent and 20 percent of the catch in each respective year. In 1997, however, the rockfish and Atka mackerel trawl fisheries accounted for 91 percent of the SR/RE catch and the hook-and-line gear fisheries for 9 percent.

Only vessels that fish for groundfish in the Aleutian Islands subarea of the BSAI would be affected by the proposed allocation of SR/RE between vessels using trawl and nontrawl gear. In 1996, 90 trawl vessels and 123 nontrawl vessels fished for groundfish in the AI subarea. Of these, 15 trawl catcher/processor vessels retained SR/RE, most of them while participating in either the POP or Atka mackerel fishery. Also in 1996, 16 freezer longline vessels retained SR/RE while participating in either the Pacific cod, sablefish, or Greenland turbot fishery. Based on 1996 ADF&G fish ticket data, 48 catcher vessels delivered SR/RE to shoreside processors, although landed amounts were small (3,000 lbs) relative to the 1996 C/P retained catch (about 750 mt).

The reported exvessel price for SR/RE ranges from \$1.10 per pound for fixed gear operations to \$1.80 per pound for at-sea trawl processing operations. Using these prices, the total value of the 1996 shortraker/rougeye retained by fixed gear fisheries is estimated at \$ 247,356, of which \$3,300 is attributed to catcher vessels landing shoreside. The estimated value of the SR/RE retained by trawl vessels is estimated at \$ 2.9 million.

Under either Alternatives 1 or 2, the potential foregone harvest opportunity to trawl and fixed gear vessels that are prevented from fishing for other species to prevent overfishing of SR/RE would vary depending on the fishery and foregone harvest amount. The 1996 total estimated exvessel value of AI subarea groundfish retained by trawl vessels was \$ 43.8 million. The value of AI groundfish retained by fixed gear vessel during 1996 was about \$ 9.2 million (Table 8). Under alternative 2, the potential for SR/RE bycatch in the trawl fisheries resulting in closure or peremption of nontrawl fisheries is eliminated.

A significant negative economic impact on the catcher vessels that retain SR/RE is not likely as a result of the proposed action given the small amounts of these rockfish species that have been retained by catcher vessels fishing in the AI subarea in past years (3,000 lbs in 1996 worth an estimated \$ 3,300). Conversely, the proposed action is expected to have a positive impact to the extent that bycatch in the trawl fisheries may be managed more effectively without impacting other gear groups. Given the above assessment, NMFS has determined that the proposed action would not result in a negative "significant impact" on small entities because it would not reduce annual gross revenues by more than 5 percent, increase total costs of production by more than 5 percent, or result in compliance costs for small entities that are at least 10 percent higher than compliance costs as a percent of sales for large entities. As a result, a regulatory flexibility analysis was not prepared.

None of the alternatives is expected to result in a "significant regulatory action" as defined in E.O. 12866.

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.

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 developed by the North Pacific Fishery Management Council (Council) under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). The Gulf of Alaska FMP was approved by the Secretary of Commerce and become effective in 1978 and the Bering Sea and Aleutian Islands Area (BSAI) FMP become effective in 1982.

Actions taken to amend the 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 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.

This Environmental Assessment/Regulatory Impact Review (EA/RIR) addresses alternatives for allocating shortraker/rougheye rockfish (SR/RE) between vessels using trawl and non trawl gear in the Aleutian Islands subarea. This action, if adopted by the Council, would be implemented under Amendment 53 to the FMP for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area. A draft EA/RIR prepared for the adjustment of the maximum retainable bycatch (MRB) percentage of SR/RE (Ackley et al, 1997) is incorporated into this document by reference.

1.1 Purpose of and Need for the Action

1.1.1 General Management History of SR/RE

Pacific ocean perch (POP), and four other associated species of rockfish (northern rockfish, rougheye rockfish, shortraker rockfish, and sharpchin rockfish) were managed as a complex in the Aleutian Islands and Bering Sea subareas from 1979 to 1990. Known as the POP complex, these five species were managed as a single entity with a single TAC. In 1991, the groundfish specifications changed the species composition of the POP complex. For the Bering Sea, the POP complex was divided into two subgroups: (1) Pacific ocean perch, and (2) shortraker, rougheye, sharpchin, and northern rockfishes combined. For the Aleutian Islands subarea, the POP complex was divided into three subgroups: (1) Pacific ocean perch, (2) shortraker/rougheye rockfish, and (3) sharpchin/northern rockfish. These subgroups were established to protect Pacific ocean perch, shortraker rockfish, and rougheye rockfish, the three most valuable commercial species in the assemblage, from possible overfishing. Each subgroup is assigned an individual TAC.

Although shortraker/rougheye are highly valued species, amounts available to the commercial fisheries are limited by relatively small acceptable biological catch (ABC) and TAC amounts that are fully needed to provide bycatch amounts in other groundfish fisheries. As a result, the directed fishery for shortraker/rougheye typically is closed at the beginning of the fishing year. Regardless of this precautionary measure, the TAC and ABC amounts specified for these species were exceeded in 1996 and 1977:

Shortraker/rougheye category	YEAR		
	1995	1996	1997 (thru Nov)
ABC (mt)	1,220	938	938
TAC (mt)	1,098	938	938
Harvest (mt)	559	959	1,042

* Source: NMFS best blend catch database.

1.1.2 Management of the SR/RE Total Allowable Catch

In 1997, inseason monitoring and management of AI fisheries were frustrated by unanticipated high harvest rates of shortraker/rougheye in the Pacific ocean perch and Atka mackerel trawl fisheries. These higher than anticipated catch rates resulted in harvest amounts that exceeded ABC and TAC. Bycatch estimates of SR/RE through mid 1997 indicated that the overfishing level would be reached if all fisheries that took these species were not closed. As a result, NMFS prohibited the retention of Atka mackerel, Pacific cod, and rockfish by vessels using trawl gear and retention of Pacific cod by hook-and-line vessels in the Aleutian Islands subarea. The directed fishery for Greenland turbot by vessels using hook-and-line gear also was closed. If necessary, NMFS was prepared to close the Individual Fishing Quota fishery for sablefish to prevent overfishing of SR/RE. Thus, although overfishing concerns stemmed primarily from the bycatch of SR/RE in the POP and Atka mackerel trawl fisheries, lucrative nontrawl fisheries that also take incidental amounts of these rockfish also were closed, or threatened with closure, to prevent reaching the overfishing level. These overfishing closures disrupted fishing plans and created a loss of economic opportunity for both the trawl and nontrawl fishing industry.

Concerns about the overall management of the SR/RE TAC, as well as trawl and nontrawl industry frustration about actual or potential fishery closures resulting from overfishing concerns prompted the Council to take several actions at its June and September 1997 meetings. First, the Council requested that options to reduce the maximum retainable bycatch (MRB) percentages for SR/RE be explored to minimize the impact that "topping" behavior may have on the rapid rate that SR/RE TAC is reached. "Topping off" occurs when vessel operators alter fishing operations to catch more SR/RE than they otherwise would so that their retained catch of these species may be maximized under MRB constraints. An analysis was prepared on alternative reductions of the MRB percentage (Ackley et al., 1997) and presented to the Council at its September 1997 meeting. Based on the analysis, the Council voted to establish a separate MRB percentage for SR/RE of 7 percent relative to deepwater species (rockfish species, sablefish, Greenland turbot, and flathead sole) and 2 percent relative to all other species except arrowtooth flounder, which cannot be used as a species against which SR/RE may be retained.

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At its June 1997 meeting the Council also noted that other management measures may be considered in the future to address the competitive use of SR/RE bycatch in trawl and non trawl fisheries, including gear allocations. At its September 1997 meeting, the Council reiterated its request to staff to develop an analysis for an allocation of SR/RE between vessels using trawl and non-trawl gear to more directly respond to concerns by fixed gear groups that trawl bycatch of SR/RE could continue to result in closures of fixed gear fisheries. Although the proposed MRB percentage for SR/RE would reduce trawl bycatch rates to the extent that incentives are reduced to trawl vessel operators to top off their catch of POP or Atka mackerel with SR/RE, the potential still exists that overall bycatch amounts may exceed TAC and force closures of fixed gear fisheries. In general, representatives of the trawl and fixed gear industry supported an allocation of SR/RE between gear groups and recommended to the Council that 70 percent of the TAC be allocated to vessels using trawl gear and 30 percent of the TAC be allocated to vessels using non-trawl gear.

1.2 Alternatives Considered

1.2.1 Alternative 1: Status Quo

The SR/RE TAC would not be allocated between gear groups. MRB constraints would be the only management tool in place to reduce bycatch rates and bycatch amounts in the trawl fisheries would continue to threaten fixed gear fisheries with closures if overall bycatch amounts exceed TAC and result in overfishing concerns.

1.2.2 Alternative 2 : Allocate SR/RE between vessels using trawl and nontrawl gear

The SR/RE TAC would be allocated between vessels using trawl and non trawl gear. Options for gear allocations as follows:

- 30 percent to non trawl gear/70 percent to trawl gear - Industry recommendation
- 20 percent to non trawl gear/80 percent to trawl gear - Historical catch distribution

1.3 Analysis of SR/RE bycatch based on observer data

Data and assumptions

A proposal for reduction of MRB percentages for SR/RE in Aleutian Islands fisheries was presented to the Council in September 1997 (Ackley et al., 1977). The MRB analysis of shortraker/rougeye rockfish bycatch in Aleutian Islands fisheries was conducted without regard to gear type and concentrated on the Atka Mackerel and Pacific Ocean perch (POP) fisheries. The MRB analysis was based on observer data collected from hauls made during 1995 and 1996. The observer data were provided by the NMFS and included vessel, haul and catch information. In total, 4,066 hauls were observed in 1995 and 4,931 in 1996. All of the gear types (bottom trawl, pelagic trawl, pot and longline) were included in the MRB analysis. Because the MRB percentages apply across all gear types, distinctions in gear were not included in this analysis. Given that the Atka Mackerel and POP fisheries are trawl fisheries, the MRB analysis provides a description of trawl fishery rockfish bycatch in the Aleutian Islands.

The present analysis focuses on fixed gear fisheries. Data are the same as described in the previous document, and the same targeting algorithm was used. Targets were assigned as dominant target species catch in a tow, with the "other" groundfish category being equivalent to the total catch minus the combined catch from all possible target groups. When this "other" groundfish category was greater than any individual target species, the haul was classified as other groundfish and may not accurately represent the actual intended target. Hauls assigned the rockfish target were further subdivided by dominant rockfish catch for target assignment. Gear groups included two trawl categories (bottom net and pelagic net), pot gear and longline gear as recorded by observers.

The majority of groundfish are taken by trawl gear in the Aleutian Islands, with bottom trawls for Atka mackerel dominating the catch, however, a substantial catch of pollock by vessels using pelagic trawls occurred in 1995 (Figures 1 and 2, top panel). Bottom trawl fisheries for Pacific Ocean Perch (POP) and Pacific cod also exist. The longline fishery accounted for 4.5% and 4.4% of the total observed groundfish in 1995 and 1996, respectively (Table 1). The greatest groundfish catch in the longline fishery was Pacific cod, and in 1995 and 1996, catch in the Pacific cod fishery made up 56% and 70% of the total longline catch, respectively. The 3,148 mt of Pacific cod observed in 1995, and the 4,013 mt observed in the 1996 longline catch was approximately 37% and 30% of the total observed Pacific cod catch in each year, respectively (Table 1).

The AI trawl fisheries account for over 98 percent of the observed rockfish catch (Tables 2 and 3). The highest rockfish *catch* is taken in the directed POP fishery, and the highest *bycatch* of rockfish is taken in the trawl fishery for Atka Mackerel (Figures 1 and 2, middle panel). Northern rockfish are the primary species encountered in the Atka Mackerel trawl fishery, with some POP and shortraker/rougheye bycatch. Note that individual trawl hauls with a high catch of northern rockfish have been classified as northern rockfish hauls in Figures 1 and 2. In comparison with the catch and bycatch of rockfish in trawl fisheries, longline catch and bycatch of rockfish is very small and the longline percentage of total rockfish bycatch was approximately 1.5% in 1995 and 1% in 1996 (Tables 2 and 3).

Bycatch of SR/RE is highest in the trawl POP fishery, and in the Atka Mackerel trawl fishery (Figures 1 and 2, panel 3). Shortraker/rougheye are also encountered in longline fisheries for Pacific cod, and other groundfish. Again, hauls dominated by species not included as target categories have been classified as other groundfish in this analysis. Examples of dominant catch in these hauls in the longline fisheries include grenadier and halibut. Of the total observed shortraker/rougheye bycaught in 1995 and 1996, 20.5% and 10.1% were taken in longline fisheries in each year, respectively (Tables 2 and 3).

The other rockfish species most commonly encountered by longline gear are shortspine and thornyhead rockfish. In 1995, the longline fisheries accounted for 93.2% of the observed bycatch of these two species and in 1996, 65% of the shortspine/thornyhead rockfish were taken in longline fisheries (Tables 2 and 3). Whereas the dominant groundfish catch in the longline fisheries is Pacific cod (see above), few shortspine thornyhead rockfish are taken in the Pacific cod fishery (less than 1% in 1995 or 1996). The fisheries which primarily encounter shortspine/thornyhead rockfish are the other groundfish category (56.2% and 64.7% of the shortspine thornyhead in 1995 and 1996, respectively), and the sablefish and Greenland turbot fishery (Tables 2 and 3). The other groundfish category may have had actual targets of sablefish or Greenland turbot.

Average bycatch rates

Fixed gear bycatch rates (Table 4) were calculated as had been done previously for the trawl Atka Mackerel and POP fisheries in the Aleutian Islands (Table 5 and 6), and for rockfish fisheries in the Gulf of Alaska (Heifetz and Ackley, 1997). The five fixed gear fisheries for which bycatch rates were calculated were the longline fisheries for Pacific cod, other groundfish, sablefish and Greenland turbot and the pot gear fishery for Pacific cod. Table 4 provides the estimated annual bycatch rates of rockfish in these fisheries based on observer data, as well as the calculated coefficient of variation (CV) for each estimate.

The bycatch rates for several species in fixed gear fisheries are very low, and these species include northern rockfish, POP, pelagic slope rockfish (includes dusky rockfish), thornyhead rockfish and other rockfish (Table 4). The reported amounts of these species bycaught in the fixed gear fisheries in each year are also provided in Tables 2 and 3, and as discussed above, the bycatch amounts are low as well.

The bycatch rates for shortraker/rougheye are highest in the longline fisheries for sablefish and other groundfish. The longline fishery for sablefish had bycatch rates of 4.61% and 4.98% in 1995 and 1996, respectively, and the

longline fishery for other groundfish (which may actually include some sablefish targeted hauls) experienced bycatch rates of 2.62% and 2.21% in each year, respectively. Although the longline fishery for Greenland turbot had a relatively low bycatch rate of shortraker/rougheye in 1995 of 1.13%, the bycatch rate more than doubled to 3.02% in 1996.

The highest bycatch rates of any rockfish species were found in the longline fishery for sablefish with bycatch rates of shortspine/thornyhead rockfish of 13.21% in 1995 and 13.88% in 1996 (Table 4). Shortspine/thornyhead rockfish were also the rockfish species bycaught at the highest rates in the Greenland turbot fishery (4.29% in 1995 and 6.33% in 1996). The longline fishery classified as other groundfish had bycatch rates of shortspine thornyhead of 2.81% in 1995 and 2.02% in 1996.

The bycatch rates of aggregated rockfish in fixed gear fisheries were lowest in the two fisheries for Pacific cod. The pot gear fishery for Pacific cod had a rockfish bycatch rate of 0.06% in both 1995 and 1996, and the longline fishery for Pacific cod had rates below 2% (Table 4). The aggregated rockfish bycatch rates were fairly similar in the other groundfish longline fishery and the Greenland turbot longline fishery with overall rates between approximately 5% and 6% with the exception of the 1996 Greenland turbot fishery which had an aggregated rockfish bycatch rate of 9.35%. The highest aggregated rockfish bycatch rates were found in the longline fishery for sablefish. In 1995 the bycatch rate in this fishery was 18.1%, and in 1996 the rate was 19.1%.

1.4 Analysis of SR/RE bycatch based on NMFS estimates of total catch

NMFS's best blend estimate of SR/RE catch shows a distribution between trawl and nontrawl fisheries that is similar to that indicated by observer data, above. In 1995 and 1996, trawl gear fisheries accounted for 82 percent and 80 percent of the SR/RE catch, respectively. Conversely, hook-and-line gear fisheries accounted for 18 percent and 20 percent of the catch in each respective year (Table 7). In 1997, however, the rockfish and Atka mackerel trawl fisheries accounted for 91 percent of the SR/RE catch and the hook-and-line gear fisheries for 9 percent.

The relative distribution of SR/RE catch among fixed gear fisheries differs considerably between the best blend estimates (Table 7) and the estimates based on observer data (Tables 2 and 3). This disparity is due largely to different algorithms used to define target fisheries.

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 the Department of Commerce (NMFS) for most marine species, and the Department of Interior (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 Endangered Species Conservation Act 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 ¹	<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 ²	<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 ³	<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 takings⁴ 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.

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

¹species is present in Bering Sea area only.

²listed as endangered in waters west of Cape Suckling.

³listed as threatened in waters east of Cape Suckling .

⁴ 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)).

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 during the 1998 Total Allowable Catch 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 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 has no plan to reopen Section 7 consultations on Steller sea lions during the 1998 Total Allowable Catch specification process.

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 go 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 for the Snake River sockeye, Snake River spring/summer chinook, and Snake River fall chinook salmon. The designations did not include any marine waters, 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. 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 to renew consultation for the 1998 Total Allowable Catch specification process.

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 Reinitiation 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 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 overall 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 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 allocative in nature and are designed to improve the inseason management of SR/RE bycatch in the AI fisheries. None of the alternatives would affect overall 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.

Assistant Administrator for Fisheries, NOAA

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 Regulatory Flexibility Act (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 RIR is designed to provide information to determine whether the proposed regulation is likely to be "economically significant."

3.1 Economic Impact on Small Entities

The objective of the RFA 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 negative significant impact on a substantial number of small entities, an Initial Regulatory Flexibility Analysis (RFA) 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% of the total universe of small entities affected by the regulation. A regulation would have a negative "significant impact" on these small entities if it reduced annual gross revenues by more than 5 percent, increased total costs of production by more than 5 percent, or resulted in compliance costs for small entities that are at least 10 percent higher than compliance costs as a percent of sales for large entities.

The following table presents data summarizing the number of vessels by gear and area that harvested Alaska groundfish in 1995. These data include some vessels that would not be considered "small entities" for purposes of the RFA because their gross annual revenues exceed \$ 3 million, although the preponderance of vessels experience annual revenues less than this amount.

Statistics on number of vessels (catcher vessels and catcher/processor vessels) that caught groundfish by area, gear and target fishery in 1995. Data is excerpted from the "Economic Status of the Groundfish Fisheries off Alaska, 1995" chapter of the draft 1997 SAFE report (NPFMC 1996).

	<u>GOA</u>	<u>BSAI</u>	<u>All Alaska</u>
<u>Trawl</u>			
All groundfish	220	184	268
pollock	138	156	199
Sablefish	4	6	10
Pacific cod	154	123	225
Flatfish	65	88	128
Rockfish	27	14	28
Atka Mackerel	2	17	18
<u>Hook and Line</u>			
All groundfish	1,351	175	1,403
sablefish	684	90	690
Pacific cod	525	100	594
Flatfish	3	44	45
Rockfish	582	21	598
<u>Pot</u>			
All groundfish	191	126	266
Pacific cod	190	124	265

Only a portion of these vessels that fish in the Aleutian Islands subarea of the BSAI would be affected by the proposed allocation of SR/RE between vessels using trawl and nontrawl gear. In 1996, 90 trawl vessels and 123 nontrawl vessels fished for groundfish in the AI subarea. A break out of these vessels follows:

Vessel Type	Number¹
Trawl catcher/processor	43
Trawl catcher vessel	47
H&L catcher/processor	23
H&L catcher vessels	71
Pot catcher/processor	2
Pot catcher vessel	22
Total catcher vessels	140
Total catcher /processors	73

1/ Data from 1996 NMFS best Blend data base and ADF&G fish ticket data base

Of these vessels, 15 trawl catcher/processor vessels retained SR/RE, most of them while participating in either the POP or Atka mackerel fishery. Also in 1996, 16 freezer longline vessels retained SR/RE while participating in either the Pacific cod, sablefish, or Greenland turbot fishery. Based on 1996 ADF&G fish ticket data, 48 catcher vessels delivered SR/RE to shoreside processors although landed amounts were small (3,000 lbs) relative to the 1996 C/P retained catch (about 750 mt).

Under Alternative 2, total catch of SR/RE would be used to monitor gear allocations of these species and when either the trawl or nontrawl allocation is reached, SR/RE would become a prohibited species by vessels using the respective gear type. If, in spite of prohibited species status, bycatch of SR/RE still accrues at an unacceptable rate that poses overfishing concerns, NMFS would close gear specific fisheries. Hook-and-line gear fisheries would not be threatened with closure if the allocation of SR/RE to these vessels has not been attained. The gear allocation of SR/RE would allow NMFS to manage the trawl bycatch of SR/RE more effectively and to take precautionary measures to maintain bycatch within the allocated amount without affecting nontrawl fisheries. Although these measures could constrain trawl operations in the Aleutian Islands subarea, the trawl vessels fishing for Atka mackerel and POP typically are not catcher vessels and considered "small entities" for purposes of the RFA. These vessels also are used to pursue other lucrative groundfish fisheries outside the AI subarea and any foregone harvest opportunities in this subarea because of SR/RE bycatch constraints could be compensated, in part, by groundfish harvest operations outside the AI.

The industry recommended allocation of SR/RE TAC between trawl and nontrawl vessels (70/30 percent split) under Alternative 2 is intended to provide an allocation to the fixed gear fleet in excess of actual relative harvest in recent years to provide these operations adequate opportunity to fully harvest fixed gear allocations of Pacific cod and sablefish. Trawl industry representatives endorsed this split in recognition that trawl bycatch rates likely will decrease as a result of the proposed reduction in the SR/RE MRB percentage and the fact that a gear specific allocation of SR/RE will allow more effective management of SR/RE bycatch in the trawl fisheries. A gear allocation based solely on historical catch between gear groups (80/20 percent split between trawl and nontrawl, respectively) would not adequately account for the fact that fixed gear fisheries have been preempted in the past by trawl bycatch of SR/RE nor would it conform with an industry negotiated settlement on what an "equitable" allocation should be.

Under Alternative 1, management agencies could not take action to slow the bycatch rate of SR/RE in the trawl fisheries until TAC was reached. Any action would continue to be across all gear types and in a manner that could preempt fixed gear fisheries that start later in the fishing year, after the SR/RE TAC has been taken.

The amount of SR/RE harvested and retained by the trawl and fixed gear fisheries since 1995 is presented below:

Amounts of AI shortraker/rougheye harvested and retained (mt), by fishery						
Fishery	year					
	1995		1996		1997 (thru 11/97)	
	harv.	ret.	harv.	ret.	harv.	ret.
Trawl rockfish (mostly POP)	347	337	638	575	781	638
Trawl Atka mackerel	95	52	129	74	161	89
Trawl Other	17	8	4	0	5	1
Total trawl	459	397	771	649	947	728
H&L Sablefish	75	40	57	20	30	2
H&L Greenland turbot	6	5	12	11	2	0
H&L Other	18	12	120	71	63	3
Total H&L	99	57	189	102	95	5
TOTAL	558	454	960	751	1042	733

* source: NMFS best blend catch database

The reported exvessel price for SR/RE ranges from \$1.10 per pound ⁵for fixed gear operations to \$1.80 per pound ⁶ for at-sea trawl processing operations. Using these prices, the total value of the 1996 shortraker/rougheye retained by fixed gear fisheries is estimated at \$ 247,356, of which \$3,300 is attributed to catcher vessels landing shoreside. The estimated value of the SR/RE retained by trawl vessels is estimated at \$ 2.9 million.

Under either Alternatives 1 or 2, the potential foregone harvest opportunity to trawl and fixed gear vessels that are prevented from fishing for other species to prevent overfishing of SR/RE would vary depending on the fishery and foregone harvest amount. The 1996 total estimated exvessel value of AI subarea groundfish retained by trawl vessels was \$ 43.8 million . The value of AI groundfish retained by fixed gear vessel during 1996 was about \$ 9.2 million (Table 8). Under alternative 2, the potential for SR/RE bycatch in the trawl fisheries resulting in closure or peremption of nontrawl fisheries is eliminated.

A significant negative economic impact on the catcher vessels that retain SR/RE is not likely as a result of the proposed action given the small amounts of these rockfish species that have been retained by catcher vessels fishing in the AI subarea in past years (3,000 lbs in 1996 worth an estimated \$ 3,300). Conversely, the proposed action is expected to have a positive impact to the extent that bycatch in the trawl fisheries may be managed more effectively without impacting other gear groups. Given the above assessment, NMFS has determined that the

⁵ Based on industry reported 1996 exvessel price for fixed gear landings of shortraker/rougheye rockfish.

⁶ Based on industry reported price for at-sea trawl operations.

proposed action would not result in a negative "significant impact" on small entities because it would not reduce annual gross revenues by more than 5 percent, increase total costs of production by more than 5 percent, or result in compliance costs for small entities that are at least 10 percent higher than compliance costs as a percent of sales for large entities. As a result, a regulatory flexibility analysis was not prepared.

None of the alternatives is expected to result in a "significant regulatory action" as defined in E.O. 12866.

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Table 1. Observed total catch by gear and fishery, 1995 and 1996.

Total Observed Catch

Gear	Target	1995		1996	
		Weight (mt)	%subtot	Weight (mt)	%subtot
Bottom Trawl	Atka Mackerel	57,175.7	80.7%	79,959.9	79.6%
	Bottom Pollock	138.2	0.2%	130.7	0.1%
	Pacific Cod	4,544.6	6.4%	7,803.4	7.8%
	Rock - Northern	889.2	1.3%	2,636.9	2.6%
	Rock - POP	6,410.1	9.0%	8,595.6	8.6%
	Rock - Shrt/rough	112.6	0.2%	123.0	0.1%
	Other Ground	250.3	0.4%	200.4	0.2%
	Pelagic Pollock	444.1	0.6%	0.0	0.0%
	Rock Sole	23.7	0.0%	0.0	0.0%
	Greenland Turbot	886.1	1.3%	1,044.0	1.0%
	Sub total	70,874.6		100,493.9	
% Total	56.5%		77.1%		
Pelagic Trawl	Bottom Pollock	455.5	0.9%	26.9	0.1%
	Pacific Cod	193.5	0.4%	0.0	0.0%
	Other Ground	56.1	0.1%	0.0	0.0%
	Pelagic Pollock	47,585.2	98.5%	22,610.4	99.9%
	Sub total	48,290.3		22,637.3	
% Total	38.5%		17.4%		
Pot	Pacific Cod	709.4	99.7%	1,573.8	99.3%
	Other Ground	2.3	0.3%	10.4	0.7%
	Sub total	711.7		1,584.2	
% Total	0.6%		1.2%		
Longline	Pacific Cod	3,148.2	55.8%	4,012.9	70.3%
	Rock - Shrt/rough	31.5	0.6%	5.6	0.1%
	Rock - Thornyhead	5.7	0.1%	4.8	0.1%
	Other Ground	1,769.5	31.4%	1,352.4	23.7%
	Sablefish	173.0	3.1%	69.9	1.2%
	Greenland Turbot	511.1	9.1%	263.6	4.6%
	Sub total	5,639.0		5,709.3	
% Total	4.5%		4.4%		
Total		125515.61		130424.69	

Percent of target across gear type

	1995	1996
Atka Mackerel	100.0%	100.0%
Bottom Pollock	23.3%	82.9%
Pacific Cod	52.9%	58.3%
Rock - Northern	100.0%	100.0%
Rock - POP	100.0%	100.0%
Rock - Shrt/rough	78.1%	95.6%
Other Ground	12.0%	12.8%
Pelagic Pollock	0.9%	0.0%
Rock Sole	100.0% na	
Greenland Turbot	63.4%	79.8%
Bottom Pollock	76.7%	17.1%
Pacific Cod	2.3%	0.0%
Other Ground	2.7%	0.0%
Pelagic Pollock	99.1%	100.0%
Pacific Cod	8.3%	11.8%
Other Ground	0.1%	0.7%
Pacific Cod	36.6%	30.0%
Rock - Shrt/rough	21.9%	4.4%
Rock - Thornyhead	100.0%	100.0%
Other Ground	85.1%	86.5%
Sablefish	100.0%	100.0%
Greenland Turbot	36.6%	20.2%

Table 2. Catches and bycatch of rockfish species groups by gear and target fishery in the Aleutian Islands, 1995.

		Rockfish													
Gear	Target	Northern		POP		Shortspine-thornyhead		Pelagic		Shortraker/rougheye		Other rockfish		Total Rockfish	
		Weight	%subtot	Weight	%subtot	Weight	%subtot	Weight	%subtot	Weight	%subtot	Weight	%subtot	Weight	%subtot
Bottom Trawl	Atka Mackerel	1,614.2	69.3%	604.2	9.9%	0.0	0.0%	6.6	41.5%	45.8	20.3%	7.5	32.3%	2,280.4	26.2%
	Bottom Pollock	7.4	0.3%	19.8	0.3%	0.0	0.0%	0.0	0.0%	1.3	0.6%	0.0	0.0%	28.4	0.3%
	Pacific Cod	50.2	2.2%	15.4	0.3%	0.0	0.0%	2.1	13.3%	0.2	0.1%	0.0	0.0%	67.9	0.8%
	Rock - Northern	509.2	21.8%	45.7	0.8%	0.0	0.0%	2.7	17.2%	4.0	1.8%	10.8	46.4%	581.8	6.7%
	Rock - POP	147.3	6.3%	5,350.7	88.0%	2.2	48.2%	4.1	26.2%	112.8	50.1%	5.0	21.4%	5,622.9	64.7%
	Rock - Shrt/rough	0.0	0.0%	34.3	0.6%	0.2	3.9%	0.0	0.2%	52.0	23.1%	0.0	0.0%	87.0	1.0%
	Other Ground	2.0	0.1%	2.3	0.0%	1.5	32.7%	0.2	1.6%	2.8	1.3%	0.0	0.0%	9.5	0.1%
	Pelagic Pollock	0.0	0.0%	3.3	0.1%	0.0	0.0%	0.0	0.0%	1.9	0.8%	0.0	0.0%	5.2	0.1%
	Greenland Turbot	0.2	0.0%	7.8	0.1%	0.7	15.2%	0.0	0.0%	4.5	2.0%	0.0	0.0%	13.2	0.2%
	Sub total	2,330.5		6,083.6		4.6		15.8		225.3		23.2		8,696.2	
	% Total	99.8%		99.0%		6.8%		85.5%		78.1%		99.5%		97.7%	
Pelagic Trawl	Bottom Pollock	0.0	0.0%	11.6	18.2%	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%	11.6	16.9%
	Other Ground	0.0	0.0%	0.1	0.1%	0.0	0.0%	0.0	0.0%	0.0	0.2%	0.0	0.0%	0.1	0.1%
	Pelagic Pollock	0.5	100.0%	52.1	81.6%	0.0	0.0%	0.0	100.0%	4.0	99.8%	0.0	100.0%	56.8	82.9%
		Sub total	0.5		63.8		0.0		0.0		4.0		0.0		68.6
	% Total	0.0%		1.0%		0.0%		0.0%		1.4%		0.2%		0.8%	
Pot	Pacific Cod	0.0	100.0%	0.2	99.0%	0.0	0.0%	0.2	100.0%	0.0	94.7%	0.0	0.0%	0.4	98.5%
	Other Ground	0.0	0.0%	0.0	1.0%	0.0	100.0%	0.0	0.0%	0.0	5.3%	0.0	0.0%	0.0	1.5%
		Sub total	0.0		0.2		0.0		0.2		0.0		0.0		0.4
	% Total	0.0%		0.0%		0.0%		0.9%		0.0%		0.0%		0.0%	
Longline	Pacific Cod	3.8	95.5%	0.1	55.7%	0.2	0.3%	2.4	94.6%	5.3	9.0%	0.0	68.5%	12.2	9.3%
	Rock - Shrt/rough	0.0	0.0%	0.0	2.5%	0.9	1.5%	0.0	0.4%	14.2	24.0%	0.0	0.0%	15.1	11.5%
	Rock - Thornyhead	0.0	0.0%	0.0	0.0%	2.5	4.0%	0.0	0.0%	0.0	0.1%	0.0	0.0%	2.5	1.9%
	Other Ground	0.2	4.4%	0.1	41.8%	34.8	56.2%	0.1	5.0%	32.5	54.9%	0.0	12.6%	70.1	53.2%
	Sablefish	0.0	0.0%	0.0	0.0%	11.2	18.0%	0.0	0.0%	3.9	6.6%	0.0	18.9%	15.3	11.6%
	Greenland Turbot	0.0	0.1%	0.0	0.0%	12.4	20.1%	0.0	0.0%	3.3	5.5%	0.0	0.0%	16.4	12.5%
	Sub total	3.9		0.2		62.0		2.5		59.3		0.1		131.7	
	% Total	0.2%		0.0%		93.2%		13.6%		20.5%		0.3%		1.5%	
	Total	2,334.9		6,147.8		66.6		18.5		288.6		23.3		8,896.9	
	% Grand Total	26.2%		69.1%		0.7%		0.2%		3.2%		0.3%		100.0%	
														GRAND TOTAL	
														8,896.9	100.0%

Table 3. Observed catch/bycatch of rockfish species groups by gear and target fishery in the Aleutian Islands, 1996.

		Rockfish													
Gear	Target	Northern		POP		Shortspine-thornyhead		Pelagic		Shortraker/rougeye		Other rockfish		Total Rockfish	
		Weight	%subtot	Weight	%subtot	Weight	%subtot	Weight	%subtot	Weight	%subtot	Weight	%subtot	Weight	%subtot
Bottom Trawl	Atka Mackerel	2,619.8	57.9%	985.2	11.6%	0.3	1.6%	28.7	43.3%	64.5	12.2%	6.0	42.0%	3,715.1	27.2%
	Bottom Pollock	1.9	0.0%	20.9	0.2%	0.0	0.0%	0.1	0.2%	0.0	0.0%	0.0	0.0%	23.0	0.2%
	Pacific Cod	124.0	2.7%	30.3	0.4%	0.0	0.0%	2.8	4.2%	1.1	0.2%	0.3	1.9%	158.5	1.2%
	Rock - Pelagic	0.0	0.0%	2.9	0.0%	0.0	0.0%	10.0	15.0%	0.0	0.0%	0.0	0.0%	12.9	0.1%
	Rock - Northern	1,604.2	35.4%	218.8	2.6%	0.0	0.0%	21.8	32.9%	17.1	3.2%	4.4	30.9%	1,869.0	13.7%
	Rock - POP	177.8	3.9%	7,198.1	84.7%	17.9	80.5%	2.9	4.3%	367.1	69.5%	1.3	9.0%	7,767.7	56.8%
	Rock - Shrt/rough	0.1	0.0%	23.3	0.3%	2.3	10.2%	0.0	0.0%	71.4	13.5%	2.3	16.3%	99.4	0.7%
	Other Ground	0.7	0.0%	10.4	0.1%	1.4	6.3%	0.0	0.1%	2.5	0.5%	0.0	0.0%	15.1	0.1%
	Greenland Turbot	0.0	0.0%	3.5	0.0%	0.3	1.5%	0.0	0.0%	4.8	0.9%	0.0	0.0%	8.7	0.1%
	Sub total	4,528.5		8,493.5		22.3		66.3		528.5		14.3		13,669.4	
	% Total	99.7%		99.4%		35.0%		83.5%		89.3%		92.6%		98.6%	
Pelagic Trawl	Atka Mackerel	0.3	96.5%	0.0	0.0%	0.0	#DIV/0!	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.3	0.6%
	Bottom Pollock	0.0	0.0%	7.3	13.4%	0.0	#DIV/0!	0.0	0.0%	1.7	48.5%	0.0	0.0%	8.9	15.3%
	Rock - POP	0.0	0.0%	27.9	51.4%	0.0	#DIV/0!	0.0	0.0%	0.2	5.6%	0.0	0.0%	28.1	48.1%
	Pelagic Pollock	0.0	3.5%	19.2	35.3%	0.0	#DIV/0!	0.0	100.0%	1.6	46.0%	0.1	100.0%	21.0	36.0%
		Sub total	0.4		54.3		0.0		0.0		3.4		0.1		58.4
	% Total	0.0%		0.6%		0.0%		0.0%		0.6%		0.4%		0.4%	
Pot	Pacific Cod	0.1	100.0%	0.0	100.0%	0.0	#DIV/0!	0.7	84.4%	0.0	100.0%	0.0	#DIV/0!	0.9	87.2%
	Other Ground	0.0	0.0%	0.0	0.0%	0.0	#DIV/0!	0.1	15.6%	0.0	0.0%	0.0	#DIV/0!	0.1	12.8%
		Sub total	0.1		0.0		0.0		0.8		0.0		0.0		1.0
	% Total	0.0%		0.0%		0.0%		1.0%		0.0%		0.0%		0.0%	
Longline	Pacific Cod	11.8	99.5%	0.4	75.7%	0.2	0.5%	12.3	99.4%	30.1	50.4%	0.2	14.9%	55.5	42.0%
	Rock - Other	0.0	0.0%	0.0	0.0%	0.1	0.2%	0.0	0.0%	0.1	0.2%	0.3	24.5%	0.5	0.4%
	Rock - Shrt/rough	0.0	0.0%	0.0	0.0%	0.2	0.5%	0.0	0.0%	2.3	3.9%	0.1	7.5%	2.6	2.0%
	Rock - Thornyhead	0.0	0.0%	0.0	0.0%	1.2	3.0%	0.0	0.0%	0.2	0.3%	0.1	7.6%	1.5	1.1%
	Other Ground	0.1	0.5%	0.1	17.8%	26.8	64.7%	0.1	0.6%	21.4	35.8%	0.5	45.4%	53.4	40.4%
	Sablefish	0.0	0.0%	0.0	6.5%	4.3	10.4%	0.0	0.0%	1.5	2.6%	0.0	0.0%	5.9	4.5%
	Greenland Turbot	0.0	0.0%	0.0	0.0%	8.5	20.6%	0.0	0.0%	4.1	6.8%	0.0	0.0%	12.6	9.5%
		Sub total	11.9		0.5		41.4		12.4		59.8		1.1		132.0
	% Total	0.3%		0.0%		65.0%		15.5%		10.1%		7.1%		1.0%	
	Total	4,540.8		8,548.4		63.6		79.5		591.8		15.5		13,860.8	
	% Grand Total	32.8%		61.7%		0.5%		0.6%		4.3%		0.1%		100.0%	
														GRAND TOTAL	
														13,860.8	
														100.0%	

Table 4. Average bycatch rates of rockfish in the Aleutian Islands fixed gear fisheries
(Rates here are defined as the ratio of bycatch weight to directed species catch weight)

Bycatch Species	Fishery	Rate		CV	
		1995	1996	1995	1996
Northern	Longline Cod	0.14%	0.34%	16.94%	12.17%
	Longline Other	0.01%	0.01%	58.80%	71.20%
	Pot cod	0.00%	0.01%	70.90%	20.01%
	Longline Sablefish	0.00%	0.00%	na	na
	Longline G. Turbot	0.00%	0.00%	100.04%	na
POP	Longline Cod	0.00%	0.01%	36.09%	28.76%
	Longline Other	0.01%	0.01%	72.24%	55.24%
	Pot cod	0.03%	0.00%	20.21%	25.82%
	Longline Sablefish	0.00%	0.11%	na	98.47%
	Longline G. Turbot	0.00%	0.00%	na	na
Pelagic Slope	Longline Cod	0.09%	0.35%	17.55%	10.18%
	Longline Other	0.01%	0.01%	58.43%	48.95%
	Pot cod	0.02%	0.05%	23.22%	17.46%
	Longline Sablefish	0.00%	0.00%	na	na
	Longline G. Turbot	0.00%	0.00%	na	na
Shortraker/rougheye	Longline Cod	0.20%	0.86%	20.77%	11.74%
	Longline Other	2.62%	2.21%	12.22%	13.34%
	Pot cod	0.00%	0.00%	57.81%	38.13%
	Longline Sablefish	4.61%	4.98%	19.96%	32.03%
	Longline G. Turbot	1.13%	3.02%	23.01%	19.52%
Shortspine	Longline Cod	0.01%	0.01%	54.82%	69.13%
	Longline Other	2.81%	2.02%	7.51%	12.09%
	Pot cod	0.00%	0.00%	na	na
	Longline Sablefish	13.21%	13.88%	10.75%	13.35%
	Longline G. Turbot	4.29%	6.33%	9.69%	11.95%
Thornyhead	Longline Cod	0.00%	0.00%	na	na
	Longline Other	0.15%	0.49%	26.44%	24.26%
	Pot cod	0.00%	0.00%	na	na
	Longline Sablefish	0.19%	0.00%	76.94%	na
	Longline G. Turbot	0.23%	0.00%	57.23%	na
Other Rockfish	Longline Cod	0.00%	0.00%	71.08%	81.18%
	Longline Other	0.00%	0.05%	78.77%	43.88%
	Pot cod	0.00%	0.00%	na	na
	Longline Sablefish	0.02%	0.00%	75.89%	na
	Longline G. Turbot	0.00%	0.00%	na	na
Total Rockfish	Longline Cod	0.45%	1.59%	12.41%	8.34%
	Longline Other	5.66%	4.80%	7.32%	9.54%
	Pot cod	0.06%	0.06%	14.51%	14.54%
	Longline Sablefish	18.10%	19.10%	9.38%	13.06%
	Longline G. Turbot	5.66%	9.35%	9.83%	11.31%
Number of Hauls	Longline Cod	500	747		
	Longline Other	468	286		
	Pot cod	449	778		
	Longline Sablefish	109	44		
	Longline G. Turbot	164	89		

Table 5. Average bycatch rates of rockfish in the Aleutian Islands Atka Mackerel fishery (Rates here are defined as the ratio of bycatch weight to directed species catch weight)						
Bycatch Species	Area	Rate		CV		
		1995	1996	1995	1996	
Northern	AI	3.13%	3.81%	5.11%	4.08%	
	541	2.25%	1.90%	11.75%	11.83%	
	542	2.58%	4.08%	7.78%	7.38%	
	543	4.98%	4.90%	7.69%	5.21%	
POP	AI	1.17%	1.43%	8.77%	7.04%	
	541	1.26%	0.39%	29.82%	12.30%	
	542	0.98%	2.17%	12.58%	9.68%	
	543	1.56%	1.57%	10.75%	11.40%	
Pelagic Slope	AI	0.01%	0.04%	25.67%	48.01%	
	541	0.02%	0.03%	50.38%	20.55%	
	542	0.01%	0.10%	32.25%	62.50%	
	543	0.00%	0.01%	72.36%	34.87%	
Shortraker/rougheye	AI	0.09%	0.09%	15.51%	16.51%	
	541	0.06%	0.01%	54.91%	34.95%	
	542	0.08%	0.16%	19.48%	15.71%	
	543	0.12%	0.10%	27.99%	33.01%	
Other Rockfish	AI	0.01%	0.01%	35.57%	36.38%	
	541	0.01%	0.00%	79.06%	41.86%	
	542	0.02%	0.01%	42.57%	61.80%	
	543	0.01%	0.01%	50.37%	45.57%	
Total Rockfish	AI	4.42%	5.40%	4.77%	3.80%	
	541	3.60%	2.34%	13.49%	10.06%	
	542	3.68%	6.54%	7.20%	6.40%	
	543	6.67%	6.60%	6.92%	5.13%	
Number of Hauls	AI	1211	1653			
	541	143	392			
	542	715	596			
	543	353	665			

Table 6. Average bycatch rates of rockfish in the Aleutian Islands Pacific Ocean Perch fishery (Rates here are defined as the ratio of bycatch weight to directed species catch weight)						
Bycatch Species	Area	Rate		CV		
		1995	1996	1995	1996	
Northern	AI	2.75%	2.46%	25.25%	18.55%	
	541	2.65%	3.55%	30.34%	28.84%	
	542	2.09%	3.77%	39.19%	42.39%	
	543	na	1.56%	na	30.14%	
Pelagic Slope	AI	0.08%	0.04%	25.07%	32.33%	
	541	0.09%	0.05%	26.35%	54.40%	
	542	0.02%	0.12%	72.39%	38.08%	
	543	na	0.01%	na	100.92%	
Shortraker/rougheye	AI	2.11%	5.08%	17.26%	10.21%	
	541	2.30%	3.71%	20.25%	25.45%	
	542	1.49%	4.78%	21.15%	22.81%	
	543	na	5.85%	na	12.59%	
Shortspine thornyhead	AI	0.04%	0.25%	31.70%	18.10%	
	541	0.02%	0.00%	37.55%	101.85%	
	542	0.12%	0.17%	45.72%	39.90%	
	543	na	0.39%	na	18.70%	
Other Rockfish	AI	0.09%	0.02%	93.33%	43.33%	
	541	0.12%	0.00%	97.46%	na	
	542	0.02%	0.10%	97.11%	50.98%	
	543	na	0.01%	na	62.56%	
Total non-POP rockfish	AI	5.09%	7.89%	15.46%	8.89%	
	541	5.19%	7.37%	17.48%	18.64%	
	542	3.75%	8.94%	24.89%	21.89%	
	543	na	7.86%	na	11.27%	
Number of Hauls	AI	210	248			
	541	142	72			
	542	59	46			
	543	9	130			

Table 7. NMFS best blend estimate of shortraker/roughey catch by gear and target fishery in the Aleutian Islands, 1995-97.

1995					1996					1997 (Thru Nov.)				
GEAR	TARGET	MT SR/RE	% GEAR SUBTOTAL	% TOTAL SR/RE CATCH	GEAR	TARGET	MT SR/RE	% GEAR SUBTOTAL	% TOTAL SR/RE CATCH	GEAR	TARGET	MT SR/RE	% GEAR SUBTOTAL	% TOTAL SR/RE CATCH
HAL	C	14	14%		HAL	C	117	62%						
HAL	K	3	3%		HAL	K	3	2%		HAL	C	61	62%	
HAL	O	1	1%		HAL	S	57	30%		HAL	K	2	3%	
HAL	S	75	76%		HAL	T	12	6%		HAL	S	33	34%	
HAL	T	6	6%		HAL Total		189		20%	HAL	T	2	2%	
HAL Total		99		18%	POT	C	0.04	100%		HAL Total		97		9%
POT	C	0.02	14%		POT Total		0.04		0%	TRW	A	161	17%	
POT	S	0.12	86%		TRW	A	129	17%		TRW	B	1	0%	
POT Total		0.14		0%	TRW	C	1	0%		TRW	C	2	0%	
TRW	A	95	21%		TRW	K	638	83%		TRW	K	781	83%	
TRW	C	0	0%		TRW	P	2	0%		TRW	P	2	0%	
TRW	K	347	76%		TRW	Z	1	0%		TRW Total		946		91%
TRW	P	5	1%		TRW Total		771		80%	Grand Total		1,044		100%
TRW	T	12	3%		Grand Total		959		100%					
TRW Total		459		82%										
Grand Total		558		100%										

Table 8. Harvest of groundfish in 1996, by gear type in the Aleutian Islands subarea, and exvessel value of retained catch

GEAR TYPE	SPECIES	TOTAL CATCH (MT)	RETAINED CATCH (MT)	VALUE ¹ (million \$)
Trawl	Atka mackerel	103,125	86,473	27.6
	POP	12,826	9,831	3.1
	non POP rockfish	7,556	2,990	0.9
	Pollock	29,052	28,067	5.5
	Pacific cod	21,179	18,613	6.3
	Flatfish	2,355	1,162	0.4
	TOTAL (includes other misc groundfish)	177,297	147,181	43.8
Hook & Line	Pacific cod	5,819	5,348	3.1
	Greenland Turbot	907	361	0.2
	Sablefish	740	714	3.0
	Rockfish	339	187	0.3
	Other species	485	1	-
	TOTAL (includes other misc groundfish)	8,556	6,611	6.6
Pot	Pacific cod	4,611	4,511	2.6
	Other species	124	39	-
	TOTAL (includes other misc groundfish)	4,738	4,549	2.6

^{1/} Value based on retained catch estimates and exvessel prices provided in the "Economic status of the groundfish fisheries off Alaska, 1996" (NPFMC 1997).

Figure 1. Groundfish catch and bycatch from observed hauls in the 1995 Aleutian Islands fisheries.

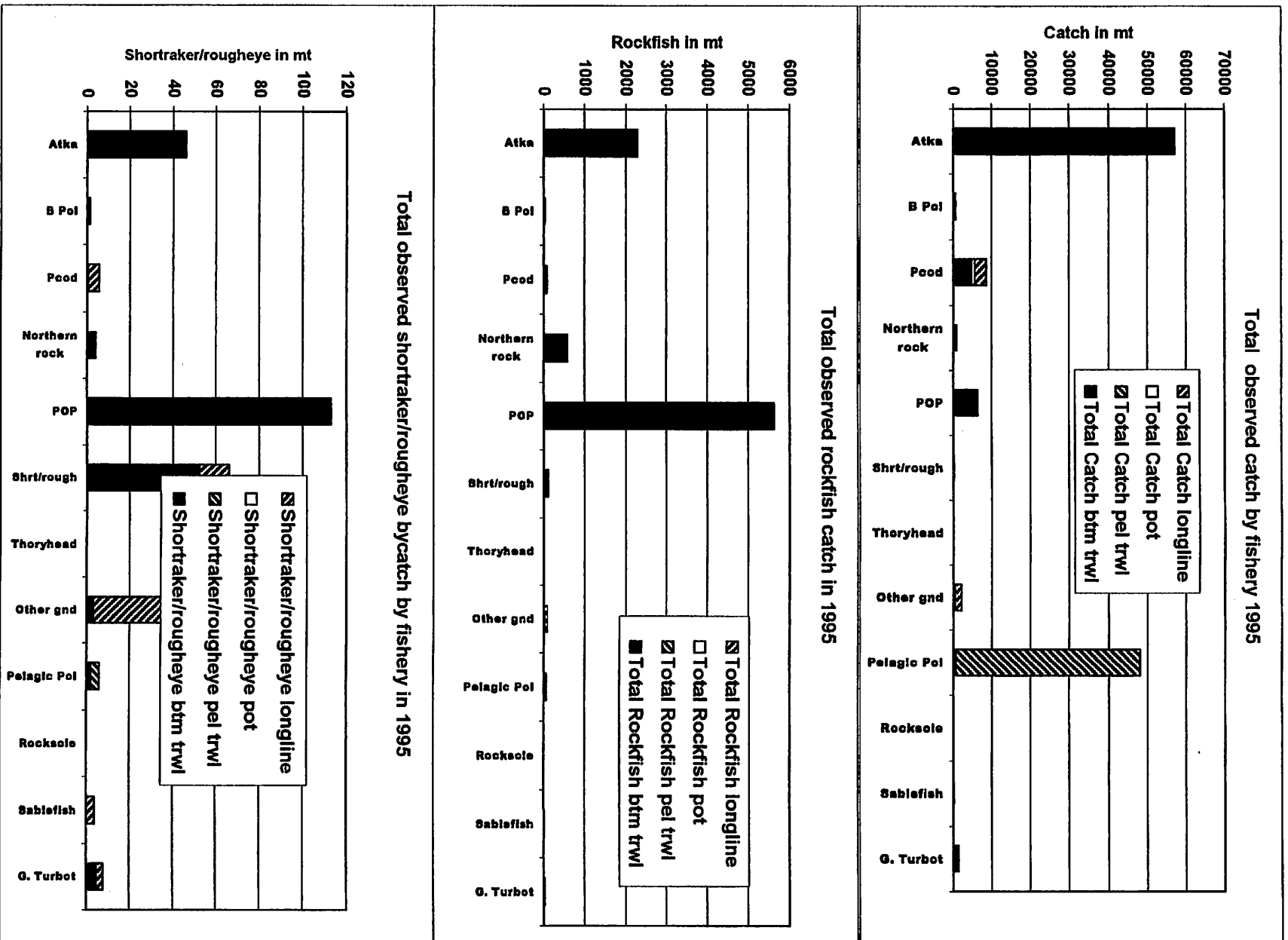
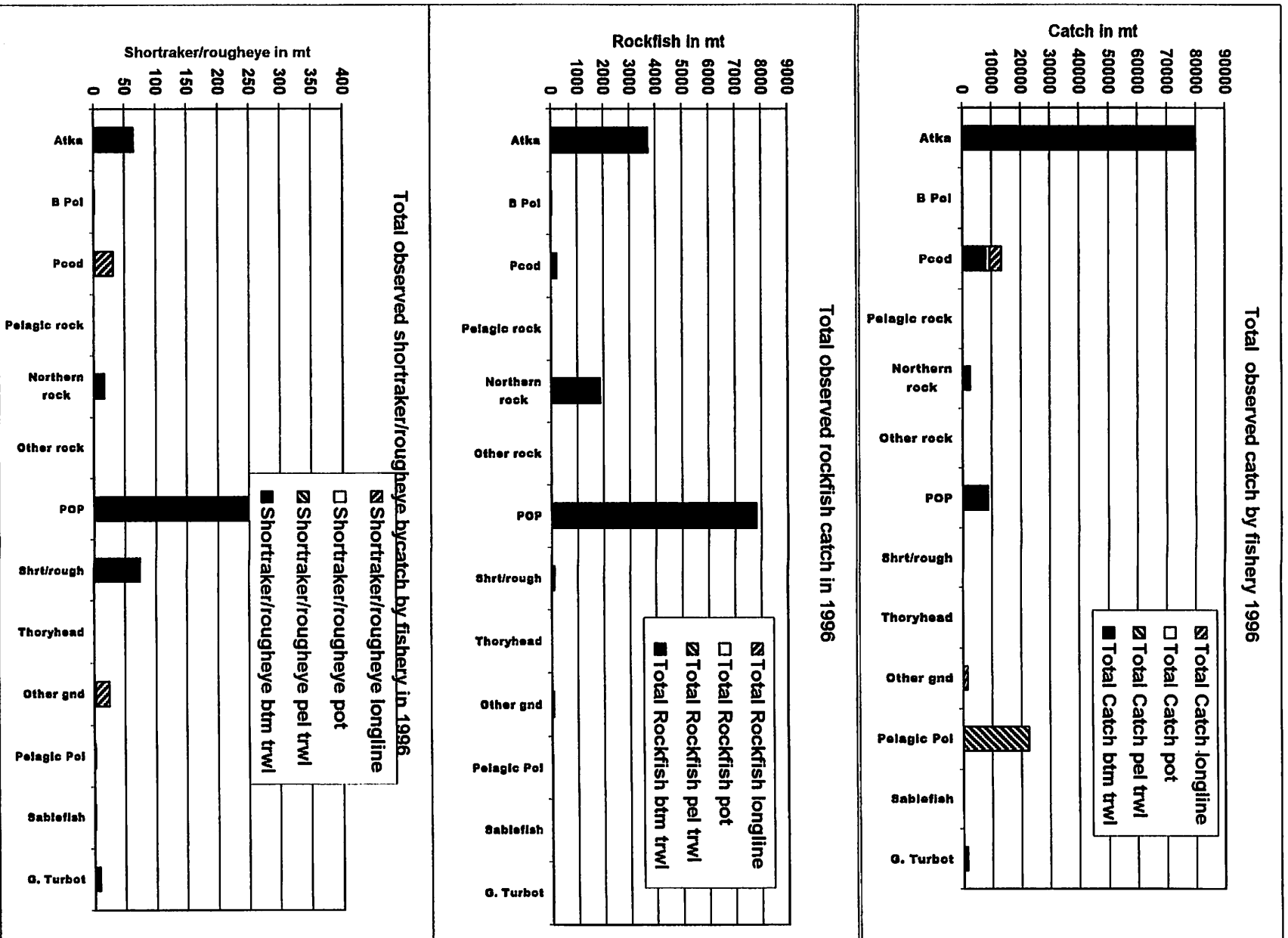


Figure 2. Groundfish catch and bycatch from observed hauls in the 1996 Aleutian Islands fisheries.

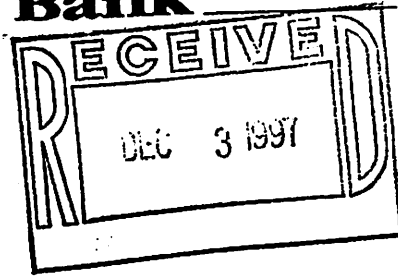


Alaska Groundfish Data Bank

TO: RICK LAUBER
CHAIRMAN, NPFMC

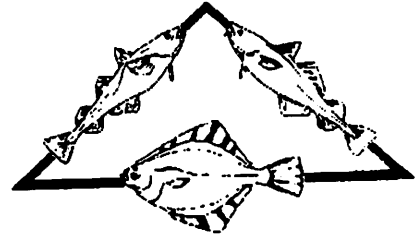
DATE: DECEMBER 3, 1997

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P.O. Box 2298 • Kodiak.

AGENDA D-3(a)
DECEMBER 1997
SUPPLEMENTAL



RE: 48 HOUR STAND DOWN AND PREREGISTRATION BEFORE MOVING BETWEEN THE GULF OF ALASKA AND BERING SEA AGENDA ITEM D-3(a)

The members of Alaska Groundfish Data Bank support the proposed regulations to require trawl vessels to "stand down" for 48 hours before moving between the Gulf of Alaska and Bering Sea (or vice versa).

Currently only factory trawlers have to register when changing reporting areas. However, the capacity of the catcher vessel fleet is great enough that sudden switches in effort between oceans has, most notably in the Western Gulf, resulted in substantial catch overages simply because managers had no way to know the effort shift had occurred.

The 48 hour stand down is also an important part of this package as it discourages and in many cases prevents a sudden change in effort between the time a closure is announced and the time the closure actually takes effect. It is during this period that some of the greatest overages have occurred in the Western Gulf.

We want to make it clear that the provisions of these two proposals were intended to apply only to trawl gear. The purpose of the proposals is to assure that managers have adequate information to assure that catch does not exceed quotas and to prevent surges of effort into an area after a closure is announced. These two problems appear to occur only in the trawl fisheries.

AGDB urges the Council to proceed as quickly as possible through the process to approve these two proposals and urges NMFS to implement the new regulations as quickly as possible.

Thank you for your consideration of our comments.

A handwritten signature in black ink, appearing to read "Chris Blackburn".

Chris Blackburn, Director
Alaska Groundfish Data Bank