FIRST AMENDMENT AND IMPLEMENTING REGULATIONS TO THE PACIFIC COAST GROUNDFISH FISHERY MANAGEMENT PLAN

INCORPORATING THE ENVIRONMENTAL ASSESSMENT, THE REGULATORY IMPACT REVIEW/REGULATORY FLEXIBILITY ANALYSIS, AND REQUIREMENTS OF OTHER APPLICABLE LAW

PACIFIC FISHERY MANAGEMENT COUNCIL
526 S.W. MILL STREET
PORTLAND, OREGON 97201

JULY 30, 1984

PACIFIC FISHERY MANAGEMENT COUNCIL

526 S. W. Mill Street
Portland, Oregon 97201
Phone: Commercial (503) 221-6352
FTS 8-423-6352

CHAIRMAN
John R. Donaldson

EXECUTIVE DIRECTOR
Joseph C. Greenley

July 30, 1984

FINAL FIRST AMENDMENT TO THE PACIFIC COAST GROUNDFISH FISHERY MANAGEMENT PLAN

This document contains the first amendment to the Pacific Coast Groundfish Fishery Management Plan (FMP). The FMP controls domestic and foreign fishing for groundfish in the fishery conservation zone adjacent to the coasts of Washington, Oregon, and California.

Experience has demonstrated that seven requirements of the FMP should be modified to accommodate more flexible, fair, and reasonable management of the groundfish fishery. The amendment revises these requirements so that regulations are less burdensome to most fishermen, the groundfish resource will be conserved as necessary and fairly allocated, and the optimum yield will be achieved.

Federal regulations proposed to implement the first amendment to the FMP were published April 16, 1984 (49 FR 14994) and became effective on July 29, 1984. These regulations also acknowledge that the Quinault, Hoh, Quileute, and Makah Indian tribes have informed the Council that they will adopt regulations governing tribal members who fish for groundfish off the Washington coast in 1984, and that these regulations will be consistent with federal regulations implementing the FMP. Implementing regulations are appended at the end of this document.

Joseph C. Greenley
Executive Director

TABLE OF CONTENTS

LIST OF PREPARERS

These amendments to the Pacific Coast Groundfish Fishery Management Plan (FMP) were prepared by a team of scientists and fishery managers with special expertise in the groundfish resources. The issues under consideration resulted from a variety of sources including a public "scoping" session and several PFMC discussions during the past year on items that might be included in an FMP amendment.

Groundfish Plan Management Team:

Robert Francis, National Marine Fisheries Service, Seattle, WA
Tom Jow, California Department of Fish and Game, Menlo Park, CA
Charles S. Korson, National Marine Fisheries Service, Terminal Island, CA
William Lenarz, National Marine Fisheries Service, Tiburon, CA
Alan Millikan, Chairman, Washington Department of Fisheries, Seattle, WA
Jack Robinson, Oregon Department of Fish and Wildlife, Newport, OR

Assisting the Team:

Katherine A. King, National Marine Fisheries Service, Seattle, WA
Henry O. Wendler, Pacific Fishery Management Council, Portland, OR
Wesley Silverthorne, National Marine Fisheries Service, Terminal Island, CA

LIST OF TABLES

ES.0 Executive Summary

This amendment analyzes seven issues relevant to the Pacific Coast Groundfish Fishery Management Plan (FMP) which provides a framework for management of groundfish species in the Fishery Conservation Zone (FCZ) off Washington, Oregon, and California. The FMP was implemented by the Secretary of Commerce on September 30, 1982. Changes in regulations that implement the FMP result from these analyses.

ES.1 Background

The amendment to the FMP addresses the need to alter regulations that control the fishery and the groundfish resources, remove or modify provisions imposed as a result of inexperience with early design features of pelagic trawls and other gear technology, and provide the Pacific Fishery Management Council (Council) with added flexibility to respond to changing conditions in the fishery. These issues resulted from a public "scoping" session and Council discussion of items that might be included in a FMP amendment.

ES.2 Issues in the FMP Amendment

In the draft of this document (1st draft) released for public review in September 1983, nine issues were considered for amending the Groundfish FMP. Based on public comment and other persuasive considerations, the Council selected status quo as its preferred alternative for two of the issues and, therefore, these issues are omitted here. Only the seven issues which amend the FMP are included in this document.

Two or more alternative actions are analyzed for each of the seven issues considered for amendment in the FMP: viz., (1) flexibility in the regulatory process for managing Pacific ocean perch (POP), (2) marking requirements for fixed gear, (3) vessel identification requirement, (4) inclusion of additional species in the groundfish management unit, (5) imposing a trip limit on sablefish as the OY is approached, (6) pelagic trawl footrope requirement, and (7) separate (numerical OY) management for northern jack mackerel. Alternatives being considered in each of these issues are described briefly below. Preferred options are underlined.

ES.2.1 Flexibility in the Regulatory Regime for Pacific Ocean Perch (POP)

This issue examines the need to provide flexibility in the regulations for Pacific ocean perch (POP) to meet changing conditions in the fishery or in the resource. Current regulations for POP impose vessel trip limits of 5,000 lbs. or 10% of the total trip weight on landings of POP. The regulations were implemented to prevent catches in excess of ABC and to implement a 20-year rebuilding program. The regulations can be changed only by amending the FMP. In 1982 landings were well below OY levels established in the rebuilding schedule. Increased management flexibility by allowing limits to be adjusted without amending the FMP would have permitted landings to more closely approximate OY without impeding the rebuilding schedule.

In order to more closely follow the rebuilding schedule yet provide fishermen with opportunity to harvest the established OY's, this issue considers two options: (1) status quo, i.e., retain vessel trip limits of 5,000 lbs. or 10%

of the total trip weight as presently in the FMP, and (2) add provisions for modifying the 5,000 lb. or 10% trip limit or for imposing other more appropriate management regimes while not exceeding the OY's established by the current 20-year rebuilding schedule.

ES.2.2 Marking Requirements for Fixed Gear

Marking requirements were imposed to prevent entanglement of gear (mobile or fixed) among users of the same grounds by marking the location of fixed gear. The present regulation which requires marking the groundline every one mile has been deferred until January 1, 1984. Requirements for marking the terminal ends of fixed gear became effective January 1, 1983.

Three options are considered under this issue: (1) status quo. i.e., traps set on a groundline and longlines must be marked on the surface as stated in the FMP, and every one mile of groundline (for traps and longlines) also must be marked at the surface with a pole and flag, and either a light or radar reflector, (2) status quo for terminal marking but delete one-mile marking of groundline, and (3) mark only one end of groundline and delete one-mile marking of groundlines.

ES.2.3 Vessel Identification Requirement

Existing regulations require that groundfish fishing vessels over 25 feet in length must display the vessel's official number on both sides of the deckhouse or hull, and on a weather deck so that the number is visible from above. Some vessel operators believe this regulation (1) is unnecessary as vessels are already clearly identified by name and port, (2) would be difficult to accomplish due to limited deck space on some vessels, (3) should not be required for commercial passenger fishing vessels (CPFV's) or private recreational boats, and (4) will not necessarily facilitate enforcement.

Three alternatives are considered under this issue: (1) status quo, i.e., all vessels over 25 feet in length that fish for groundfish shall comply with the FMP identification requirement, (2) require only commercial groundfish fishing vessels over 25 feet to comply with FMP identification requirement, and (3) delete the vessel marking requirement.

ES.2.4 Inclusion of Additional Species in the Groundfish Management Unit

Several species of varying importance to commercial and recreational groundfish fisheries are omitted from Table 1 in the FMP and are not part of the groundfish management unit. These species are targeted on by directed fisheries or they are taken coincidentally in the multi-species fishery. The rapid development and maturity of rockfish fisheries and implementation of trip limits or annual quotas require that the management unit be expanded to include additional species that are now or soon may be landed in quantity, or whose harvest impedes management of other regulated species. Targeting on presently unlisted species, many of which are spatially associated with the Sebastes complex, reportedly has resulted in large incidental catches and subsequent discards of those Sebastes species the Council intended to protect by imposing a trip limit in 1983.

Two options are considered under this issue: (1) status quo, i.e., add no new species to the current groundfish management unit, and (2) include in the FMP all species of the family Scorpaenidae that occur seaward of Washington, Oregon, and California and the following species:

ROUNDFISH	cabezon	Scorpaenichthys marmoratus
	kelp greenling	Hexagrammos decagrammus
FLATFISH	curlfin sole	Pleuronichthys decurrens
	rock sole	Lipidopsetta bilineata

ES.2.5 Imposing a Trip Limit on Sablefish as the OY is Approached

The regulation to impose trip limits when 95% of OY is reached was designed to provide nearly equal shares to the two primary gears (trawl and fixed gear) and prevent unnecessary discards of sablefish. The character of the fishery has changed since 1979 and trawl vessels now account for over half of the sablefish landings. Trip limits essentially eliminate target fishing (by fixed gear) resulting in near-cessation of fishing by this element of the fleet. On the other hand, trawl vessels could continue to fish until 100% of the OY is reached and some fishermen have perceived this as discrimation against fixed gear.

Three options are considered under this issue: (1) status quo, i.e., retain present sablefish trip limit when 95% of OY is reached, (2) close the sablefish fishery when 100% of the OY is attained with no trip limit imposed prior to closure, and (3) when 90% of the OY is landed, the remaining 10% is divided equally between fixed gear (5%) and trawl gear (5%). In the latter case, trawl vessels will be placed on trip limits.

ES.2.6 Pelagic Trawl Footrope Requirement

The requirement that pelagic trawl footropes must be no larger than 1.75 inches in diameter initially was imposed to discourage fishing on the bottom with pelagic trawls, and was aimed specifically at protecting immature flatfish. The present regulation does not respond to changes in gear technology, fishermen's experience, or changing conditions in the fishery, one of which was a directed U.S. fishery for widow rockfish.

Two options are considered in this issue: (1) status quo, i.e., retain the provision which requires pelagic trawls to have unprotected footropes at the trawl mouth (without rollers or bobbins). Footropes must be 1.75 inches in diameter, including twine necessary for seizing material, and sweep lines, including the bottom leg of the bridle must be bare, and (2) retain present regulation but omit specification of footrope diameter.

ES.2.7 Separate (Numerical OY) Management of Northern Jack Mackerel

In 1983, a joint venture company requested an allowance of 6,500 mt of northern jack mackerel. Although such an allowance could not be designated without establishing a numerical OY, the Council recommended, as an interim measure, to increase the incidental retention percentage for jack mackerel taken in the joint venture for Pacific whiting to 10%, which would raise the overall joint venture retention allowance to 10,000 mt. At the same time, the

Council recommended an analysis of possible separate management of northern jack mackerel, i.e., whether or not a numerical OY is appropriate.

Alternatives considered on this issue are: (1) status quo; continue multi-species management, and (2) separate management of northern jack mackerel by designating a numerical OY.

List of Acronyms and Abbreviations Contained in the Amendment

ABC	acceptable biological catch
Council	Pacific Fishery Management Council
DAP	domestic annual processing
FCZ	fishery conservation zone
FMP	Pacific Coast Groundfish Fishery Management Plan (January 1982)
GMT	Groundfish Management Team
JVP	joint venture processing
MSY	maximum sustainable yield
mt	metric tons
NMFS	National Marine Fisheries Service
OY	optimum yield
PMP	Preliminary Fishery Management Plan for the Trawl Fisheries of Washington, Oregon, and California (as amended)
RIR	Regulatory Impact Review
TALFF	total allowable level of foreign fishing

ISSUE 1. Flexibility in the Regulatory Regime for Pacific Ocean Perch

This issue examines the need to provide flexibility in achieving the 20-year rebuilding schedule for Pacific ocean perch (POP) in response to changing conditions in the fishery or in the resource. Current regulations for POP impose vessel trip limits of 5,000 lbs. or 10% of the total trip weight on landings of POP. The regulations were implemented to prevent catches in excess of OY and to implement a rebuilding program. The regulations can be changed only by amending the FMP. In 1982 landings were well below OY levels established in the rebuilding schedule. Increased management flexibility by allowing trip limits to be adjusted or by adopting other fishing restrictions without amending the FMP, would have permitted landings to more closely approximate OY without impeding the rebuilding schedule.

Background

The FMP clearly documents that POP stocks in the INPFC Vancouver and Columbia areas were severely depleted by overfishing in the late 1960's and early 1970's and remained in a depressed condition in 1979. In an effort to restore these stocks to maximum production levels, the Council adopted a 20-year rebuilding schedule. The schedule established annual OY levels of 600 mt in the Vancouver area and 950 mt in the Columbia area. Vessel trip limits of 10,000 lbs. or 10% of the total weight of fish on board (whichever is greater) were imposed for 1981 with the stipulation that the trip limit would be reduced to 5,000 lbs. or 10% of the fish on board in 1982 if the OYs were exceeded in either area. Landings of POP in 1981 in the Columbia area exceeded the 950 mt quota by 40 mt. Landings in 1982 under the new trip limits dropped from 990 mt in 1981 to 632 mt in the Columbia area. Vancouver area landings dropped from 269 mt in 1981 to 224 mt in 1982. The decrease in landings was primarily a result of vessels avoiding areas of POP abundance. In addition, some vessels may have discarded fish at sea when unavoidable catches exceeded the trip limit allowance. Trawl caught POP which are returned to the sea will not survive.

In an effort to more closely follow the rebuilding schedule and to provide an opportunity for fishermen to harvest the entire OY, the Council considered the following management options.

Options (the preferred option is underlined)

Option 1. (Status quo). Retain the 5,000 lbs./10% trip limit which could be changed only through the plan amendment process.

Option 2. Provide the flexibility to alter the the 5,000 lb./10% trip limit or impose other fishing restrictions which would maintain the 20 year rebuilding schedule.

Option 2 would provide the Council the flexibility to develop a necessary management regime to achieve the rebuilding schedule but not exceed OY. The OYs would be set each year consistent with the current 20-year rebuilding schedule based on the latest data. The OYs could be decreased any time in response to findings of additional stress on the POP stock, or in order to sustain the 20-year rebuilding schedule. The current trip limit would remain in effect until changed by the Council and implemented by the Regional Director, National Marine Fisheries Service.

Findings of stress on the POP stock were documented in the FMP and acknowledged by approval of the 20-year rebuilding schedule. Consequently, long-term stress is assumed. Thus, Option 2 provides the means to achieve OY under the assumption that, as long as POP is managed under the rebuilding schedule, the stock is stressed.

Under Option 2, the procedures in the regulations at 50 CFR §663.23 would apply if the trip limit were modified or alternate management measures were considered. The Council first would document that landings were not achieving the 20-year rebuilding schedule, and then would recommend action which would allow the rebuilding schedule to be achieved. The Regional Director, after consultation with the Council and directors of the state fishery management agencies, could either accept or reject the recommendation but could not modify it. The Regional Director would publish a notice of proposed action in the Federal Register and receive public comment before making the final decision to accept or reject the Council's recommendation (unless prior comment is found to be contrary to the public interest). As with other management actions taken to alleviate biological stress, the actions taken under Option 2 could be recommended and implemented at any time of the year.

Impacts

The basic objective of the current management regime for POP is to rebuild the stocks to maximum production levels in 20 years (beginning in 1982). Option 1 could lead to rebuilding the POP stock in less than 20 years if the current trip limit kept landings below OY. Option 2 not only allows the current trip limit to be modified, it also would allow alternate management measures to be imposed, consistent with the rebuilding schedule. The 20-year schedule was adopted in the FMP as a reasonable compromise between rebuilding the stock and restricting the fishery.

Option 2 would provide the Council with the ability to regulate POP with the same flexibility it now has for other species. Under Option 1, the status quo allows no flexibility to assure that the rebuilding schedule is met and thus is more rigid than management of other species.

The direct biological impacts of Option 2 are minor because POP has been exploited for over thirty years and is currently being managed to rebuild stocks. Neither option would change the OY, the annual quota for POP. The incremental increase in landings under Option 2 would be small, but rebuilding could occur somewhat faster than the 20-year schedule if the status quo (Option 1) is maintained.

An indirect biological effect of Option 2 might be the reduction of landings of other overexploited stocks by temporarily redirecting fishing effort toward POP. However, the amounts of POP that could be taken (the coast-wide OY is only 1,550 mt) could not accommodate a large shift from other fisheries, nor would it relieve much pressure on other stressed stocks. Consequently, no significant biological or environmental impacts are expected from either option.

The economic impacts of Option 2, like the biological impacts, depend on the extent that landings could be increased without exceeding OY. (Landings above OY are prohibited.) For example, if implemented in 1982, Option 2 would have

allowed landings greater than those achieved under the status quo (Option 1) and could have altered the current practice of discarding POP which are in excess of the 5,000 lb./10% trip limit. Fishermen would have benefited economically by selling fish which they caught accidentally but were not allowed to retain under the status quo. If 1982 landings had been increased to OY levels, fishermen could have realized an increase of over $300,000 in gross income. Processors would also benefit by producing and selling additional POP fillets. With a 30% yield and using a wholesale price of $1.50 lb. for perch fillets (Urner Barry Price Report, 1982), processors could increase gross revenues by $500,000 due to increased landings of POP. Landings below OY may unnecessarily restrict gross revenues of fishermen and processors. Virtually all stocks of traditionally harvested groundfish are fully utilized and some (i.e., widow rockfish, yellowtail rockfish, canary rockfish) have been harvested above ABC levels for several years. Therefore, few alternative fisheries exist.

No significant impacts on the biological or physical environment are associated with either option. The POP fishery is regulated by quota and a rebuilding schedule specified in the FMP. Neither option changes the amount of POP that may be landed coast-wide. The levels of discards expected with either option are not biologically significant.

Interaction With Other Amendment Issues: There is no interaction between Issue 2 and the other issues considered in this amendment.

Recommendation: The Council preferred Option 2. Effective resource management requires the flexibility to respond quickly to new or unusual circumstances as they occur. Approval of a procedure to permit the Council to change regulations as circumstances dictate (within the limitations of the rebuilding program) may help minimize discards, assure that an OY will be more nearly achieved, and provide short-term benefits to fishermen in the event they are permitted to land larger quantities of POP within the 20-year rebuilding schedule.

FMP Reference: Section 1.4.2.4 - Pacific Ocean Perch (pages 1-18, 1-19 of FMP dated January, 1982)

Regulation: 50 CFR 663.27(b)(2)

ISSUE 2. Marking Requirements For Fixed Gear

Current fixed gear (trap and longline) regulations include requirements to mark (1) each terminal end with a pole and flag, light, radar reflector, and buoy, and (2) each mile of groundline with a pole and flag, and either a light or radar reflector. These requirements were imposed to prevent entanglements of gear (other fixed gear or mobile gear such as bottom and shrimp trawls) by marking the location of fixed gear. In response to letters and other public testimony regarding the safety, need for, expense (Table 2-1), and loss of fishing time due to the use of the one-mile markers, the Council recommended to defer implementation of the groundline marking requirements until January 1, 1984 so that these provisions could be reevaluated. Requirements for marking the terminal ends of fixed gear became effective January 1, 1983. The Council reconsidered both the groundline and terminal end marking requirements for fixed gear. In so doing, it also resolved discrepancies in the FMP regarding the types of markers (e.g., flag, light, etc.) required. No change has been proposed for individually set traps which must be marked like the terminal end of a groundline.

Background

Fixed and mobile gears often fish on the same grounds and compete for space. Many fixed gear fishermen broadcast the location of their gear on the commonly monitored radio frequency and cooperate with other fixed gear fishermen and mobile gear fishermen to minimize direct gear conflicts. Nonetheless, some gear conflicts occur. The groundline marking requirements were included in the FMP as a result of testimony that a vessel was using nine miles of steel groundline and that this poorly marked gear presented a hazard to trawlers which snagged the gear and found it extremely difficult to disentangle. The length and description of the gear was found to be exaggerated after the FMP had been approved.

Prior to implementation of the FMP there were no marking requirements for fixed gear other than state regulations to identify ownership. Fixed gear fishermen used various methods to mark the location of their gear, including buoys, flags and radar reflectors. Many fishermen marked gear on both ends but some preferred to mark gear on one end only. There is no known instance of fixed gear fishermen voluntarily adding other markers to any section of their gear, including one marker per mile of groundline.

Options

Option 1. (Status quo.) The groundline of trap and longline gear must be marked on the surface at both ends with a pole and flag, light, radar reflector and a buoy with clear identification of the owner. Every one mile of groundline must also be marked at the surface with a pole and flag, and either a light or radar reflector.

Option 2. The same as Option 1 (status quo) for terminal marking of trap and longline groundlines, but one mile marking of groundlines is not required.

Option 3. Only one end of trap and longline groundlines must be marked as in Option 1 (at the surface with a pole and flag, light, radar reflector and a buoy with clear identification of the owner). One-mile marking of groundlines is not required.

Table 2-1. Estimated costs in 1983 of marking fixed gear.

Material	Costs ($)
Crab Marking line of 5/16 inches diameter, 200 fms	70
Buoy	35-45
Pole	5
Flag	12
Light	10-50
Radar reflector	15-25
Total for one terminal marker	147-207
Total for mile marker with light only	132-182
Total for mile marker with radar reflector only	137-157

Source: Marine supply store in California.

Impacts

The common purpose of the options is to provide adequate marking for fixed gear to enable detection and avoidance by vessels transiting or fishing in the same area and to prevent loss of gear by fixed gear fishermen. There is considerable controversy regarding the amount of marking necessary to provide adequate detection. Many trawlers contend that there should be markers on both ends of a groundline and at least each intermediate mile. Many fixed gear fishermen testified that markers attract interest and vessels steer toward buoys out of curiosity and then accidentally snag the buoys or groundline. Further, fixed gear fishermen argued that even the most carefully marked gear is difficult to detect during inclement weather or when rough seas prevail and that unattentive or busy fishermen may not spot the gear under the best of circumstances.

Option 1 (status quo) requires the most extensive marking. The marking requirement for terminal ends (and individual traps) became effective January 1, 1983. Thus the initial expense of terminal marking requirements has already been felt. The one-mile marking of groundlines has not yet been imposed. Testimony from fixed gear fishermen indicates that marking each mile of groundline is dangerous especially when fishing in deep water, and costly. Gear is pulled from one end; as the gear is retrieved the mile-marker and line drift free and may present a hazard to the propeller of the fishing vessel. The mile-line marker could easily be 3,000-8,000 feet long. One fisherman testified earlier that in addition to the added expense of buoys and lines, handling time would be increased about 20%. Some fixed gear fishermen argued that the groundline marking regulation is unnecessary, and that the only way to prevent gear conflicts, regardless of marking, is by effective radio communication of gear locations.

Mobile gear fishermen who support Option 1 cited increased ability to detect markers makes avoidance of the gear much easier. Lost time can result if gear is entangled and damaged. Tangling a long, heavy groundline can be dangerous, especially in rough seas, if it cannot be easily cut or otherwise disengaged.

The marking requirements of Option 1 are unique. No other Pacific Coast fishery management agency imposes this type of regulation. Conflicts, whenever they occur, have been resolved, without regulations, by agreements between the affected parties.

Option 2 requires markers on both ends of a groundline but not each intermediate mile. Many fixed gear fishermen currently mark gear on both ends to simplify location and retrieval of gear in case one buoy is lost. The gear would be less visible than with Option 1. The pro's and con's of gear marker visibility and tangling are identical to those previously discussed. The cost to fishermen would be less than Option 1 in both time and money because one-mile marking would not be required. Option 2 maintains the regulations that currently are in effect (one-mile marking has been deferred at least until January 1, 1984). Thus, there is no incremental cost associated with this option above that which has already been imposed under Option 1.

Option 3 requires only one marker at one end of a groundline. Some fishermen prefer this option because it is the least costly. Fixed gear fishermen argued that less gear may be lost to mobile gear with this option because vessels will not be attracted by the markers and subsequently tangle the gear or tear off the buoy marker.

Fixed gear fishermen with small vessels have testifed that a regulation requiring more than one buoy is unnecessarily restrictive because they do not have adequate deck space to handle the extra gear, and because in many cases the groundline is less than one mile in length. They point out that fishermen are not restricted from using any number of additional buoys if they wish, and that if additional marking were a cost-effective way of avoiding lost gear, it would be more widely used.

Economically, Option 1 is the most costly of the three options, not only in terms of marking equipment but, ironically, also in terms of gear that allegedly disappears due to curious or mischievous fishermen who otherwise might not have seen the gear. The costs of gear marking equipment are given in Table 2-1. Under Option 1 (status quo), the total cost for both terminal end markers is estimated to be from $295-$415, assuming that the skipper purchases 5/16 inch crab rope and uses 200 fathoms of line. Adding in the cost of marking every mile of groundline can increase the expense approximately $130-$180 per mile marker. Assuming deployment of two terminal end markers, plus three one-mile markers, the compliance cost for one fixed gear vessel fishing one groundline could be as high as $700-$960. For the 257 pot and longline vessels operating in 1981, this represents a minimum fleet cost estimated to range from $180,000-$247,000 should the current regulation be implemented in January 1984. This is not an annual cost to the industry, but will vary depending on the average number of groundlines fished per vessel and the average useful life. These costs assume all vessel operators must purchase new equipment to comply with the marking regulations. Options 2 and 3 are less costly, and thus do not impose an additional economic burden on the fishing industry relative to the status quo. However, a relaxation of the marking requirement

could raise the possibility of more frequent gear interactions and increase the likelihood of lost or damaged gear. The expense of repairing or replacing trap or longline gear could be far greater than the nominal cost of gear marking equipment. However, if increased marking of fixed gear really provided a benefit to fishermen, its practice should be more widespread and objections less prevalent.

These options have minor biological and environmental importance. If traps or longlines are lost they may clutter the bottom and be a nuisance to fishermen who snag or catch them in trawls. Lost traps may render the grounds unfishable to longlines for some time. Traps may continue to fish for a period of time but the required biodegradable escape panels will prevent continued fishing over an extended period. Most fixed gear fishermen locate gear with navigational aids (primarily LORAN C) and can retrieve lost gear readily by grappling across the groundline.

Interaction With Other Amendment Issues: There is no interaction between Issue 2 and any other issue considered in this amendment.

Recommendation: The Council preferred Option 2.

FMP Reference: Section 1.4.2.3 - Sablefish (pages 1-16 and 1-17 of FMP dated January 1982)

Regulation: 50 CFR 663.26(d)(4) and (f)(2)

ISSUE 3. Vessel Identification Requirement

At issue is a request to examine the requirement that groundfish fishing vessels must be clearly marked, as stipulated in the regulations at 50 CFR §663.6. This regulation states that groundfish vessels over 25 feet in length must display the vessel's official number (either the Coast Guard documentation number or state certificate number) on the port and starboard sides of the deckhouse or hull, and on a weather deck so the number is visible from above. Both commercial and recreational vessels must be marked in this way. Some vessel operators feel this regulation (1) is unnecessary since vessels are already clearly identified with names and hailing ports, (2) can be difficult to accomplish because deck space is limited on many vessels, (3) should exclude commercial passenger fishing vessels (CPFVs) or private recreational boats, and (4) will not necessarily facilitate enforcement.

Background

This requirement originally was recommended by the Coast Guard and NMFS to facilitate enforcement of the Pacific Coast groundfish regulations. The intended purpose was to standardize vessel identity coast-wide, and establish a unique and clearly visible identifier which would minimize duplicate fly-overs and unnecessary boarding by enforcement officials. Prior to FMP implementation, the only official number required on the exterior of a vessel was the state registry numbers marked on both sides of the bow in contrasting letters at least three inches high. (The Coast Guard required all vessels over 5 net tons to permanently affix the official documentation number to an interior bulkhead or main beam, display a name on both sides of the bow, and a name and hailing port on the stern.) State numbers apparently are not visible from long distances and for identification purposes a vessel's name can be confusing because several vessels sometimes have the same name.

All domestic commercial and recreational vessels over 25 feet in length which fish for groundfish in the FCZ off Washington, Oregon, or California are subject to this regulation. Table 3-1 indicates that in 1981 there were 1,166 commercial vessels engaged in directed fishing on groundfish and an additional 448 CPFVs which fished for groundfish. An unknown, but large, number of commercial shrimpers, crabbers, and salmon trollers over 25 feet in length also land incidentally caught groundfish. Finally, a substantial number of private recreational vessels over 25 feet in length fish for groundfish. The total number of vessels subject to the current vessel indentification requirement, then, is probably at least double the 1,615 commercial and CPFV vessels listed in Table 3-1.

Options (the preferred option is underlined)

Option 1. (Status quo). All vessels over 25 feet in length that fish for groundfish either commercially or recreationally must display the vessel's number on the port and starboard sides of the deckhouse or hull, and on a weatherdeck so as to be visible from above. The number must contrast with the background and be in block Arabic numerals at least 18 inches high for vessels over 65 feet long and at least 10 inches high for vessels between 25 and 65 feet in length.

Option 2. Only vessels engaged in commercial fishing for groundfish and over 25 feet in length must display identification as stated in Option 1. Recreational vessels (both commercial passenger fishing vessels and private recreational vessels) would be exempt from the requirement.

[Commercial fishing is defined in current regulations (50 CFR 663.2) as fishing by a person in possession of a valid State commercial fishing license. Option 2 requires the marking of all vessels over 25 feet which land groundfish for sale, whether or not groundfish are the target species].

Option 3. Delete the vessel marking requirement for all groundfish vessels.

Table 3-1. Commercial[1/] and recreational groundfish vessels in 1981 potentially impacted by vessel identification requirement.

	Washington	Oregon	California	Total
Trawl	86	147	176	409
Pot	7	11	48	66
Longline	55	21	115	191
Setnet	-	-	105	105
Jig	55	165	175	395
CPFV	100	200	148	448
Total				1,614

1/ Does not include vessels targeting on non-groundfish species but which do land and sell groundfish.

Source: State fishery agencies.

Impacts

The initial cost of this regulation (Option 1) to fishermen was originally estimated in the RIR (November 1981) at $41,370 based on 1979 fleet information. The following analysis updates the original cost estimate by using 1981 fleet data and by including gear categories that previously were omitted. For the purposes of this analysis, all vessels are assumed to be over 25 feet in length.

In order to comply with the identification requirement which became effective January 1, 1983 (Option 1), vessel operators incurred a cost either to have Arabic numerals painted on by a professional jobber or to purchase materials and supplies necessary to affix numerals on the vessel themselves. Assuming compliance with current regulations, the only additional cost of Option 1 is the annual maintenance of repainting numbers.

The cost of employing a professional jobber is estimated to be $175-$200 per vessel (based on contacts with some professional sign painters located in California and Oregon). Materials (brushes, paint, stencils) that would have to be purchased by the vessel owner are conservatively estimated to cost approximately $20 per vessel.

The initial estimated cost attributable to Option 1 ranged from $62,100-$291,000. To estimate a minimum cost of compliance (Table 3-2), it is assumed that 15% of the groundfish trawl vessels, 10% of other commercial vessels, and 10% of the CPFV fleet will use professional painters. The operators of the remaining vessels will incur out-of-pocket expenses for material costs only. The expense of hiring a professional jobber ($175 per vessel) is used in estimating an upper limit for the cost of supplies, labor and vessel time. Because the initial expense of compliance included one-time costs of vessel re-design and certain materials, the annual maintenance cost of vessel identification is substantially lower.

Table 3-2. Minimum initial costs of vessel identification requirement (Option 1) by gear category (price year 1981).

Gear	Cost ($) Professional Service	Vessel Owner	Total
Trawl	10,675	6,960	17,635
Pot	1,225	1,180	2,405
Longline	3,325	3,440	6,765
Setnet	1,750	1,900	3,650
Jig	6,825	7,120	13,945
CPFV	8,750	8,960	17,710
Total			$62,110

NOTE: See footnote Table 3-1.

The benefit of Option 1 is that it provides the most efficient use of enforcement time and effort. A unique vessel number permits quick identification and eliminates the need for extended effort to determine a vessel's official identity. The ability to identify vessels from the air is instrumental in enabling the enforcement of season, area, and trip frequency restrictions, and detecting new or illegal fishing operations without having to drastically increase Coast Guard cutter patrol days. The identification requirement also permits more rapid and efficient searches for those vessels either overdue or reporting distress. It should also avoid potential discrimination allegations by requiring all groundfish gear groups to display consistent identification. The disadvantage of Option 1 is the cost to user groups, a volatile issue when other fisheries are not similarly regulated or have conflicting requirements. However, Option 1, the most costly of the three options, already has been implemented.

Option 2 excludes CPFVs and private recreational vessels from the requirement. Recreational vessels, even if over 25 feet in length, often have limited space to accommodate another vessel identifier and may be unable to easily comply with the existing regulation. Annual estimated costs to the fleet under this option range from $44,455-$204,000. Option 2 could be interpreted as discriminatory by favoring one gear group (recreational) over another (commercial). Option 2 also requires marking of any vessel landing groundfish for sale, even though it did not target on groundfish. Because most enforcement issues deal with the commercial fleet, requiring additional identification on recreational vessels does not provide a significant enforcement benefit.

Option 3 eliminates the vessel identification requirement for all vessels fishing for groundfish, either commercially or recreationally. Names would continue to be affixed to the exterior of a vessel and the official documentation number would be attached as required by the states and Coast Guard before the FMP was implemented. Clearly, fishermen's annual maintenance expenses would be saved. However, most commercial vessel operators have already spent the time and money to comply with the current regulation and most will have the stencils and paint needed for maintenance. Although Coast Guard and NMFS surveillance could become more difficult if additional overflights and cruise time are needed to enforce regulations, the expense of enforcement will not necessarily increase. Surveillance is budgeted and conducted simultaneously with other missions such as drug enforcement and search and rescue operations, and budget increases to compensate for lost efficiency in fishery enforcement are not likely. Thus none of the three options is expected to have much effect on the financial cost of enforcement. The unquantifiable cost of Option 3 is in terms of lost efficiency and effectiveness of enforcement efforts if vessels cannot be readily identified. Option 3 also avoids the confusion of inconsistent (or non-existent) vessel identification requirements in other fisheries.

There are no biological or environmental impacts associated with any of these options.

Interaction With Other Amendment Issues: There is no interaction between Issue 3 and other issues considered in this amendment.

Recommendation: The Council preferred Option 2.

Reference page in FMP: Section 1.4.6 - Vessel Identification (page 1-23 of FMP dated January 1982)

Regulation: 50 CFR 663.6

ISSUE 4. Inclusion of Additional Species in the Groundfish Management Unit

Species of varying importance to commercial and recreational groundfish fisheries are not listed in Table 1 of the FMP and therefore are not part of the groundfish management unit. These unlisted species are target species of directed fisheries or they are taken coincidentally in the multi-species groundfish fishery.

Background

The FMP provides names of 49 species of cartilaginous or bony fish. In the planning process, a greater number of species had been considered and many were omitted because of their limited distribution or low importance and value. As coast-wide groundfish fisheries developed, however, species heretofore unimportant have been caught and landed in quantity. Others have occurred in groundfish fisheries where a particular species is locally abundant. The rapid development of rockfish fisheries and the implementation of trip or annual quotas to protect certain stocks emphasize the need to expand the management unit to include groundfish species that are now or soon may be landed in quantity, or whose harvest impedes management of other regulated species.

Options (the preferred option is underlined)

Option 1. (Status quo). No changes in species of the management unit.

Species listed in Table 1 of the FMP are, with few exceptions, caught and landed by commercial and recreational fisheries from the FCZ. A substantial number of unlisted species are also taken in commercial and recreational groundfish fisheries.

Option 2. Include in the FMP all species of the family Scorpaenidae that occur seaward of Washington, Oregon, and California and the following species:

ROUNDFISH	cabezon	*Scorpaenichthys marmoratus*
	kelp greenling	*Hexagrammos decagrammus*
FLATFISH	curlfin sole	*Pleuronichthys decurrens*
	rock sole	*Lepidopsetta bilineata*

The family Scorpaenidae includes the genera *Sebastes*, *Scorpaena*, *Sebastolobus*, and *Scorpaenodes*. About 65 scorpaenid species now important or potentially important to commercial or recreational fisheries, as well as those taken incidental to these fisheries, would be added to the FMP management unit. Table 1, as it would be revised by this option, appears in Table 4-1 at the end of this issue. The additions are marked with **.

Impacts

It is acknowledged in Option 2 that as new resources, markets and technologies become available, new species should be added to the management unit. Intense and unlimited fisheries on an unlisted species could adversely impact its

future productivity. Moreover, when new fisheries develop on a species taken with the multi-species complex of groundfish but which is not included in the FMP, biological and economic consequences may arise that affect regulated species of the complex as well as the resource users.

The shortcomings of the status quo (Option 1) surfaced in management efforts to reduce catches of the Sebastes complex (those Sebastes rockfish listed in the FMP except POP, widow, and shortbelly rockfish) by imposing trip limits in 1982 and 1983. There are other species of Sebastes, not regulated by the FMP, which have become acceptable alternatives. Targeting on these unlisted species, many which are spatially associated with the Sebastes complex, reportedly has resulted in additional incidental catches and discards of those species the Council intended to protect. Ironically, fishing mortality of the Sebastes complex may remain unacceptably high, in part, due to target fishing on unregulated species. The amount of discards is unknown, but there have been reports that discards exceed landings. Although these discards are not yet believed to be large or responsible for stressing the regulated Sebastes complex, further fishing mortality clearly does not benefit an already stressed resource. Whereas Option 1 sustains this situation, Option 2 would add previously unlisted species to the Sebastes complex, thereby discouraging unlimited targeting at the expense of currently protected species.

Until more biological data are available, expanding the management unit to include the species in Option 2 would not change the ABC for any component of the multi-species complex. Most of the species to be added to the management unit under Option 2 have historically occurred in catches and landings of coastal fisheries. These unlisted species were included in historical landing information from which MSY's were developed. While not named in the FMP, catches of these species were considered in formulation of MSY's, ABC's, and OY's of the FMP and thus their inclusion would not change these estimates. Moreover, landings of the additional species have been relatively low, further indicating no changes in MSY or ABC are necessary. In 1982, 150 mt of rock sole and 25 mt of curl fin sole were landed in the Washington, Oregon, and California area, less than 1% of the total flatfish catch of 32,483 mt. Cabezon and kelp greenling landings totaled only 50 mt in 1982. Landings of the additional scorpaenid species in this amendment were estimated at 500 mt for 1982, less than 1% of the total rockfish landings of 61,403 mt.

Some fishermen may resist adding species to the management unit because such action would preclude unlimited expansion of new fisheries. However, some of these new fisheries are operating at the expense of traditional fisheries that are fully developed. Inclusion of these new species in the FMP is meant to avoid undermining the management measures adopted by the Council to sustain other established fisheries, notably on the Sebastes complex.

The socio-economic impacts of Option 2 are difficult to quantify. Landings of species proposed for inclusion in the FMP have been low, probably less than 1% in all species categories for the years of record. Even if ABC's remain unchanged and the Sebastes complex harvest quota is not liberalized, the potential loss in landings for industry is negligible.

The enforcement and compliance implications vary with each option. Under Option 1 and present management regimes, enforcement officials must sort and

identify each species of rockfish (most are Sebastes) to determine which are subject to regulation and which are not. It has been (conservatively) estimated that at least two full working days are needed by enforcement officials and professional biologists to speciate an 80,000 lb. delivery of rockfish (a large delivery under current regulations). Because this process is tedious and slow, rockfish regulations are difficult and expensive to carry out and the number of enforcement actions that can be taken are limited. Similarly, in order to comply with current trip limits, fishermen are expected to differentiate between regulated and unregulated rockfish species, an unreasonable expectation when at least 60 species are involved coast-wide. Clearly, meaningful enforcement and compliance under Option 1 have become difficult. Option 2 would provide an immediate solution by including species that are now or are likely to be targeted on in the near future and should cut enforcement time per vessel by over half.

Adoption of Option 2 would not preclude amendments to the FMP if other species of cartilaginous or bony fish become important in future groundfish fisheries. However, the groundfish fishery has reached a state of maturity and few new species are expected to become prominent in the fishery. The four species other than scorpaenids included in Option 2 updates the species of importance to the fishery.

No direct costs are imposed on fishermen by these options, although some may complain that potential earnings will be limited by management of previously unregulated species.

Interaction With Other Amendment Issues: There is no interaction between Issue 6 and the other issues analyzed in this amendment.

Recommendation: The Council preferred Option 2.

Reference page in FMP: Section 2-3 - Fishery Management Unit (Table 1)
(Pages 2-8, 2-9 of FMP dated January 1982)

Regulation: 50 CFR 663.2

Table 4-1. Species included in the FMP under Option 2 of Issue 4.

Common and scientific names of fish comprising the groundfish management unit.

	*SHARKS	
	Leopard shark	Triakis semifasciata
	Soupfin shark	Galeorhinus zyopterus
	Spiny dogfish	Squalus acanthias
	*SKATES	
	Big skate	Raja binoculata
	California skate	R. inornata
	Longnose skate	R. rhina
	*RATFISH	
	Ratfish	Hydrolagus colliei
	*MORIDS	
	Finescale codling	Antimora microlepis
	*GRENADIERS	
	Pacific rattail	Coryphaenoides acrolepis
	ROUNDFISH	
	Lingcod	Ophiodon elongatus
**	Cabezon	Scorpaenichthys marmoratus
**	Kelp greenling	Hexagrammos decagrammus
	Pacific cod	Gadus macrocephalus
	Pacific whiting (hake)	Merluccius productus
	Sablefish	Anoplopoma fimbria
	*Jack mackerel	Trachurus symmetricus
	ROCKFISH	
	Pacific ocean perch POP	Sebastes alutus
	Shortbelly rockfish	S. jordani
	Widow rockfish	S. entomelas
**	OTHER ROCKFISH	

The category OTHER ROCKFISH includes all genera and species of the family Scorpaendiae even if not listed below that occur in the Washington, Oregon, and California area except Pacific ocean perch, shortbelly and widow rockfish. The Scorpaenidae genera are Sebastes, Scorpaena, Sebastolobus, and Scorpaenodes.

**	Aurora rockfish	Sebastes aurora
**	Bank rockfish	S. rufus
	Black rockfish	S. melanops
**	Black and yellow rockfish	S. chrysomelas

	Blackgill rockfish	S. melanostomus
	Blue rockfish	S. mystinus
	Bocaccio	S. paucispinis
**	Bronze spotted rockfish	S. gilli
**	Brown rockfish	S. auriculatus
**	Calico rockfish	S. dallii
**	California scorpion	Scorpaena gutatta
	Canary rockish	Sebastes pinniger
	Chilipepper	S. goodei
**	China rockfish	S. nebulosus
	Copper rockfish	S. caurinus
	Cowcod	S. levis
	Darkblotched rockfish	S. crameri
**	Dusky rockfish	S. ciliatus
**	Flag rockfish	S. rubrivinctus
**	Gopher rockfish	S. carnatus
**	Grass rockfish	S. rastrelliger
**	Greenblotched rockfish	S. rosenblatti
	Greenspotted rockfish	S. chlorostictus
**	Greenstriped rockfish	S. elongatus
**	Harlequin rockfish	S. variegatus
**	Honeycomb rockfish	S. umbrosus
**	Kelp rockfish	S. atrovirens
	Longspine thornyhead	Sebastolobus altivelis
**	Mexican rockfish	Sebastes macdonadi
	Olive rockfish	S. serranoides
**	Pink rockfish	S. eos
**	Quillback rockfish	S. maliger
**	Redbanded rockfish	S. babcocki
	Redstripe rockfish	S. proriger
**	Rosethorn rockfish	S. helvomaculatus
**	Rosy rockfish	S. rosaceus
	Rougheye rockfish	S. aleutianus
	Sharpchin rockfish	S. zacentrus
**	Shortraker rockfish	S. borealis
	Shortspine thornyhead	Sebastolobus alascanus
	Silverygray rockfish	Sebastes brevispinis
**	Speckled rockfish	S. ovalis
	Splitnose rockfish	S. diploproa
**	Squarespot rockfish	S. hopkinsi
**	Starry rockfish	S. constellatus
	Stripetail rockfish	S. saxicola
**	Tiger rockfish	S. nigrocinctus
**	Treefish	S. serriceps
	Vermilion rockfish	S. miniatus
	Yelloweye rockfish	S. ruberrimus
	Yellowmouth rockfish	S. reedi
	Yellowtail rockfish	S. flavidus

FLATFISH

	*Arrowtooth flounder (turbot)	Atheresthes stomias
	Butter sole	Isopsetta isolepis
**	Curlfin sole	Pleuronichthys decurrens
	Dover sole	Microstomus pacificus
	English sole	Parophrys vetulus
	Flathead sole	Hippoglossoides elassodon
	Pacific sanddab	Citharichthys sordidus
	Petrale sole	Eopsetta jordani
	Rex sole	Glyptocephalus zachirus
**	Rock sole	Lepidopsetta bilineata
	Sand sole	Psettichthys melanostictus
	Starry flounder	Platichthys stellatus

* Fish included in "Other Fish," Section 6.14 of FMP
** Species added under Option 2 of Issue 4

ISSUE 5. Imposing a Trip Limit on Sablefish as the OY is Approached

The FMP requires that a trip limit (percentage of the landings by weight) be implemented in a management area (either Monterey Bay or the entire Washington-California area) whenever 95% of the OY is reached in that management area. In-season adjustments of the regulations on March 1, 1983 established a minimum size limit of 22 inches total length north of Point Conception (excluding Monterey Bay) with an incidental catch allowance for smaller fish. On June 28, 1983 this incidental catch allowance was modified to its present form, allowing landings up to 5,000 lbs. per vessel per trip of sablefish smaller than 22 inches.

Background

The original intent of the trip limit provision was to reduce the waste from discarding incidentally caught sablefish which would occur if the sablefish OY were reached and to allow other groundfish trawl fisheries to continue. An option presented in an early draft of the FMP would have triggered trip limits at 75% of OY. However, this was changed to 95% in order to minimize the negative impact on the directed fishery, which at that time was almost exclusively pursued by fixed gear (pot and longline) fishermen.

The fishery has changed significantly since 1979 (the last year of data presented in the FMP). In 1979 fixed gear fishermen landed approximately 74% of the total sablefish landings, while trawl gear accounted for only 26%. By 1982 the balance had swung the other way, with fixed gear accounting for only 42% of the landings and trawlers accounting for 55% (Table 5-1). Much of this increase in the trawlers' share was due to expanding markets for small sablefish and consequent increase in targeting and retention of incidentally caught sablefish by trawlers.

Table 5-1. Landings and percentage of sablefish taken by gear type from coastal waters of Washington, Oregon, and California in 1982.

	Landings (metric tons)	Percent of Total
Fixed Gear	7,778	42%
Trawl Gear	10,147	55%
Other Gear	576	3%
TOTAL	18,501	100%

Source: Table 5-2

Imperfections in the catch monitoring system in 1982 allowed the OY to be reached in the Washington-California management area without action being taken to impose the required trip limits. In order to reduce fishing mortality on sablefish without forcing an abrupt termination of landings, the fishery was not closed when OY was reached. Instead, the Council recommended that OY be increased by 30% (as permitted in the FMP), and the Secretary of Commerce promulgated emergency regulations which had the effect of restricting all vessels to 3,000 lbs. of sablefish per trip. This trip limit became effective on October 29 and was continued through December 31, 1982. Because it allowed pure sablefish landings up to 3,000 lbs., it did not have the same effect as the percentage trip limit established in the FMP. Fixed gear vessels landed approximately 400 mt during the period the 3,000 lb. trip limit was in effect, whereas their landings would have been near zero under Option 2.

Landings in the Monterey Bay management area did not approach the OY for that area in 1982, nor are they expected to in the near future.

The effects of the size limit adopted on March 1, 1983 and modified on July 1, 1983 have not been determined. The available data in September 1983, however, indicated that landings were not maintaining the pace set in 1982. This may be due in part to the size limit, but it should be noted that landings in January-February, 1983 were only 75% of the 1982 level for the same months, while March-April landings (after the size limit went into effect) were 68% of 1982 landings for the same period (Table 5-2). The size limit was designed to minimize targeting on small sablefish and was expected to impact the trawl fishery more than the fixed gear fishery. The increase in the allowable incidental catch of small sablefish implemented July 1, 1983 was intended to increase the landings by reducing the discard of incidentally caught small fish.

Table 5-2. Washington, Oregon, and California monthly landings and ex-vessel values of sablefish for fixed gear (pot and longline), groundfish trawl, and other gear for 1982.

	Fixed Gear		Trawl		Other Gear	
	Landings (metric tons)	Value ($)	Landings (metric tons)	Value ($)	Landings (metric tons)	Value ($)
Jan	310	140,666	378	134,045	trace	174
Feb	343	166,107	394	139,964	1	167
Mar	732	698,558	543	190,646	2	1,056
Apr	670	713,017	599	210,915	38	47,595
May	745	876,931	695	235,974	10	8,539
Jun	717	675,113	1,343	449,926	33	34,350
Jul	806	640,439	1,779	618,077	53	48,618
Aug	1,122	921,332	1,824	635,102	68	51,867
Sep	1,177	947,806	1,115	383,065	324	252,251
Oct*	784	569,971	974	321,967	40	27,709
Nov	351	265,871	265	96,192	6	4,091
Dec	21	11,387	238	84,292	1	474
TOTAL	7,778	6,627,198	10,147	3,500,165	576	476,891

*Trip limits of 3,000 lbs. became effective October 28, 1982.

Source: Pacific Coast Fisheries Information Network Report Number 23, January 24, 1983, March 16, 1982, April 11, 1982, and April 21, 1982 (preliminary data).

Options (The preferred option is underlined)

Option 1. (Status quo). A sablefish trip limit (percentage of the landing by weight) will be implemented in a management area (i.e., Monterey Bay or the Washington-California area) whenever 95% of the OY is reached in that management area. The trip limit will equal the average percentage of sablefish in all trawl landings which contain sablefish landed in that management area up to the time 95% of OY was reached. Sablefish trip limits so set will not in any case exceed 30% by weight of all fish on board.

Option 2. The sablefish fishery will be closed in a management area (either coast-wide or in Monterey Bay) when 100% of the OY is reached in that area. No incidental landings of sablefish would be allowed once the fishery is closed.

Option 3. When 90% of the OY is landed, fixed gear (pots and longlines) and trawls will each be limited to an additional 5% of OY. At the time 90% of OY is landed, trawl vessels will be put on percentage trip limits equal to the percentage of sablefish in all trawl landings

which contain sablefish. When additional landings by either fixed gear or trawls reach 5% of OY, further landings by that gear type are prohibited.

Impacts

The impact of each option on the sablefish catch, sablefish stocks, fisherman income, and other economic variables depends to a great extent on catch rates throughout the fishing year, and their relation to OY. If the catch for a particular year fails to reach at least 90% of OY, then none of the options will have any effect. If, on the other hand, the 90% level is reached early in the season, each option will have a different effect on at least some variables of interest. Both extremes are realistic since 90% of OY in 1982 was reached in early October while current projections for the 1983 catch indicate that it will not reach 90% by the end of the year.

This sensitivity of impacts to catch rates during the year means that these options will interact with any other management measures which affect the catch rate. Of particular concern, then, is the interaction with the size limit restriction effective in March 1983 as an in-season management measure and then liberalized in June, as projections indicated that the catch would fall below OY. Council actions in 1982 and 1983 indicate that it is prepared to recommend in-season management measures which will allow OY to be achieved at the end of the fishing year. Therefore, in-season adjustments can be expected which will decrease the probability of extensive season closures.

Status quo (Option 1) management was not in effect during November and December 1982 due to imposition of emergency regulations. Thus, an assessment of status quo management for these two months (most likely affected by these options) is hypothetical at best. The best that can be done is to review 1982 landings and speculate on how those results would have been modified under each of the options. This comparison will then indicate the relative effect of the three options in years when the sablefish landings are high. The probability of repeating these high catch rates in 1984 is unknown.

Under Option 1, without the present size limit, fishing would have proceeded in 1982 as indicated in Table 5-2, up to the point at which 95% of OY was reached (16,530 mt). By interpolation, the day at which 16,530 mt was attained is estimated to be October 12. At this point a percentage trip limit would have been imposed equal to the average percentage of sablefish in trawl landings (that contain sablefish) so far that year. In 1982 this was approximately 16.1%.

Under Option 1, without the present size limit, fishing would have proceeded in 1982 as indicated in Table 5-2, up to the point at which 95% of OY was reached (16,530 mt). By interpolation, the day at which 16,530 mt was attained is estimated to be October 12. At this point fixed gear fishing would have ceased and a percentage trip limit on trawlers would have been imposed equal to the average percentage of sablefish in trawl landings (that contain sablefish) so far that year. In 1982 this was approximately 16.1%.

Total sablefish landings in 1982 would have been equal to 95% of OY plus any incidental catch landed by trawlers or other gear after October 12. Since the 3,000 lb. emergency trip limit was based on the 16.1% average proportion of sablefish in trawl landings, and most sablefish landings by trawlers are less than 3,000 lbs., the catch rate by trawlers under the emergency trip limit of 1982 is probably a good estimate of what trawl landings would have been under the percentage trip limit of Option 1. Trawl landings in November and December would have been the same under Option 1, therefore, as the actual landings for those months. Trawl landings from October 1-12 are assumed to take place at the average rate for October (31.42 mt per day), while landings from October 13-31 are assumed to take place at the average rate for November (8.833 mt per day). Total trawl landings of sablefish calculated in this way are 10,147 mt. Since "other gear" landings are assumed to be strictly incidental to other fisheries, they would be unaffected by the trip limit of Option 1. Thus, they would have remained at 576 mt. Fixed gear landings are estimated to have been 6,931 mt at the end of October 12, when the fishing year for that gear would have ended under Option 1. The total landings, then, under Option 1 would have been 17,229 mt, or 99% of OY (Table 5-3).

Table 5-3. Comparison of Options When Conditions are Those of 1982.

	Option 1	Option 2	Option 3
Fixed Gear			
Landings	6,931	7,310	7,414
Revenue	$6,004,612	$6,280,145	$6,356,000
Date of trip limits	October 12	None	None
Date of closure	October 12*	October 27	November 1
Trawl Gear			
Landings	9,722	9,525	9,390
Revenue	$3,359,697	$3,280,377	$3,249,246
Date of trip limits	October 12	None	September 28
Date of closure	None	October 27	None
Other Gear			
Landings	576	564	576
Revenue	$476,891	$470,062	$476,891
Date of trip limits	October 12	None	None
Date of closure	None	October 27	None
Total Landings	17,229	17,400	17,380
Total Revenue	$9,841,200	$10,030,584	$10,082,137

* Fishing is effectively closed for fixed gear by trip limits imposed on all gear under Option 1.

Had the current size limit also been imposed in 1982, the fixed-gear landings could have been somewhat higher, the trawl landings could have been lower, and total landings could have been somewhat lower.

Under Option 2 landings are prohibited when the OY is reached and all incidental sablefish caught in the remainder of the fishing year is discarded. Again, using 1982 landings data, a projection of average October landing rates from the cumulative total for September shows OY being attained on about October 2/. Trawl landings under Option 2 (with no size limit) would have been 9,525 mt, fixed gear landings would have been 7,310 mt, and "other gear" would have been 564 mt, for a total of 17,400 mt. Fishing mortality under Option 2 would have been higher than under Option 1 because the directed catch would have been higher while incidental mortality would remain unchanged. Landings by the fixed gear fleet, which is a directed fishery, would have been higher by 379 mt, while the trawl fleet directed fishery would not have been restricted between October 12 and October 28, as it would have been under Option 1.

In summary, Option 2 in 1982 would have increased fixed gear landings by 379 mt (5% compared to Option 1), decreased trawl landings by 197 mt (2%), decreased "other gear" landings by 12 mt (2%), and increased total landings by 171 mt (1%).

Option 2 would accelerate achievement of OY (relative to Options 1 and 3) because fishing levels are not slowed beforehand, resulting in a longer closed season and increased discards of incidentally caught sablefish. The amount of discards resulting from a closed season is not known, but obviously depends on the length of the closure and levels of incidental catches. The trawl fleet landed about 500 mt of sablefish (at an exvessel value of $180,500) in the last two months of 1982 after imposition of the 3,000 lb. trip limit. However, not all of these landings may have been incidentally caught; some limited targeting may have occurred. Thus, although discards are likely to increase and closed seasons would be longer under Option 2, all gear groups would be equally restricted from landing sablefish when OY is reached.

Under Option 3 the fishery would be pursued with full competition among gear types until 90% of the OY is landed, at which point trawl and fixed gears each would be allowed an additional 5% of OY (870 mt in 1984). The fixed gear fishery, which is selective, would be allowed to take its 870 mt without additional restrictions. The trawl fishery, however, would be subject to a percentage trip limit as in Option 1. Given the fishery conditions seen in 1982, the critical 90% of OY would have been reached on September 28. Assuming that the fixed gear landings would have continued at the average 1982 rates for October and November, the fixed gear season would have ended on November 1 with season landings at 7,414 mt.

Assuming that trawl landings would have had the same average rate after imposition of the trip limit as they had in 1982 during the period of the emergency 3,000 lb. trip limit, the trawl fishery would have continued at its reduced rate from September 28 until the end of the year without reaching its allotted 5%. Landings for the trawl fishery would have been 9,390 mt. Total

landings would have been 1/,380 mt (99.9% of OY). Fishing mortality from directed trawling would have been down, but would have been partly or completely offset by increased landings of the fixed gear fleet.

While OY is achieved or nearly so under all options (>99%), the portion available to each gear type may vary. Fixed gear fishermen perceive Option 1 as favoring trawlers since a percentage trip limit eliminates fixed gear target fisheries for sablefish, whereas trawlers can continue to land. Option 3, on the other hand, may be perceived by trawlers to favor fixed-gear fishermen since this option imposes a trip limit on trawl landings (as does Option 1), but not on fixed gear landings.

Another consideration is the duration of the closed seasons under each of the three options. The longer the closed season, the higher the discards of incidentally caught sablefish that may not be retained. Using 1982 data, all three options would have allowed landings to reach 99% of OY (Table 5-3). If the trawl trip limit had been slightly larger (which is conceivable since it is based on average trawl landings, but unlikely as long as size limits remain in place which reduce trawl landings), OY could have been achieved earlier under Options 1 or 3. In that event, OY would be reached most rapidly under Option 2 since no restraints are put on the fishery, thus resulting in the longest closed season. Because of the trip limits imposed on trawl gear under Options 1 or 3, either option would result in a longer fishing season and a shorter closed season than Option 2. Although both Options 1 and 3 virtually reserve 5% OY for trawl gear, the trawl trip limit is imposed earlier in Option 3 (at 90% rather than 95% OY), probably resulting in an earlier closure in Option 3 than Option 1. Thus, assuming OY is reached in each option, discards of unavoidably caught sablefish could be highest under Option 2 and lowest under Option 1. The actual amounts of discards, although not expected to be large, cannot be quantified due to uncertainties in effort, abundance, and duration of the closed season.

The only additional administrative costs (compared to Option 1 - status quo) appear in Option 3 and are a small cost (less than $1,000) to modify the computer program (used for generating sablefish landings reports) to differentiate landings by gear type, and the $500 annual cost of issuing the extra Federal Register notice. Thus, the benefit of the potential increase in revenue to the fishermen as a result of Option 3 outweigh the administrative costs of less than $1,500. Although Option 2 implies simplification and thus savings, the Council has demonstrated its tendency to try to avoid closing fisheries by imposing restrictive management measures before OY is reached. Thus the cost of at least one additional Federal Register notice ($500) should be anticipated.

Interaction with Other Amendment Issues: There is no interaction between Issue 5 and the other issues in this amendment.

Recommendation: The Council preferred Option 3.

FMP Reference: Section 1.4.2.3 - Sablefish (pages 1-16 and 1-17) and Section 12.3.1.3 - Sablefish (pages 12-14 through 12-16 of the FMP dated January 1982)

Regulation: 50 CFR 663.27(b)(3)

ISSUE 6. Pelagic Trawl Footrope Requirement

The FMP requires the footrope of domestic pelagic trawls to be 1.75 inches or less in diameter, including the seizing material that lashes the net's webbing to the footrope. It was believed that seizing material necessary to comply with this regulation would not be robust enough to withstand chafing on the sea floor and the attachment of the webbing to the footrope would be easily destroyed. The inconvenience, time lost, fish lost, and direct cost of constantly repairing the net was intended to discourage fishing on the bottom with 3-inch mesh pelagic gear, and was aimed specifically at protecting immature flatfish (the minimum mesh size of bottom trawls is 4.5 inches). The pelagic trawl footrope provision in the FMP reflected inexperience with use of pelagic trawls, and early design features which no longer are commonly used. The present regulation is outdated because gear technology, fishermen's experience, and conditions in the fishery have changed.

Background

The pelagic gear provisions currently in effect were developed by the Legal Gear Committee appointed by the Council to determine restrictions on and specifications of gear to be used in the groundfish fisheries. Between the time the Legal Gear Committee made its recommendations in 1980 and the domestic gear requirements were implemented in 1983, substantial changes to pelagic gear used in fisheries for widow rockfish and Pacific whiting had been adopted by the fishing industry. The new configuration of pelagic gear renders these nets ineffective in catching quantities of juvenile flatfish even if they were fished on-bottom. These changes were not considered in the FMP. Also, landings data gathered since the Legal Gear Committee made its recommendations indicate that pelagic gear has not been used effectively on flatfish.

This issue affects the midwater (pelagic) trawl fleet which includes those domestic vessels targeting on Pacific whiting and many rockfish. Less than 100 vessels fished with pelagic gear in 1982.

Gear configurations. In the development of groundfish trawls, certain configurations proved to be economically sound. Pelagic trawls currently in use evolved from early models of the Polish rope wing trawl. In the late 1970's when these trawls first were used in the joint venture whiting fishery, the footrope was constructed of cable, with or without chain for weight and the webbing was lashed directly to the footrope. If fished on bottom, juvenile flatfish would have been susceptible to this 3-inch trawl. Since then, the pelagic rope wing trawl evolved. This pelagic trawl has numerous small diameter ropes extending from the footrope to the webbing at the trawl mouth. The length of these ropes ranges from a few feet to over a hundred feet depending on where they are attached, providing a space between the footrope and webbing. This configuration reduces drag while maintaining adequate spread of the net and thus requires less power to tow through the water. Even if pelagic gear is fished on-bottom, the space between the footrope and webbing should allow immature flatfish to avoid the net.

Flatfish landings. Before the FMP was implemented in September 1982 pelagic trawls were unregulated except for codend mesh size. Fishery performance clearly shows that these pelagic trawls, lacking footrope re-

quirements, were used successfully only for pelagic species and not for on-bottom species. In 1981 and 1982 particularly, the incidental catch of flatfish taken with pelagic nets in the joint venture whiting fishery was less than a metric ton. The incidental catch of flatfish by pelagic trawls in the domestic shore-based fishery also was very low. For example, in 1982 the amount of widow rockfish caught by pelagic trawls and landed in Oregon was 14,404 mt whereas incidental flatfish landings were less than 1 mt. In 1982 the pelagic trawl landings were 8,872 mt and incidental landings were 10 mt (0.1%) of which flatfish contributed less than 1 mt. Conversely, flatfish accounted for 43% and 65% of groundfish landings from bottom trawls in Oregon in 1981 and 1982, respectively, indicating that bottom trawls are the preferred flatfish gear. (An unknown number of fishermen use roller trawls to fish for Dover sole in deep water.)

Options

Option 1. (Status quo.) Pelagic trawl nets must have unprotected footropes at the trawl mouth (without rollers or bobbins). Footropes must be 1.75 inches or less in diameter, including twine necessary for seizing material. Sweep lines, including the bottom leg of the bridle must be bare.

Option 2. Same as Option 1, except that the footrope diameter is not specified.

Impacts

The biological and environmental impacts of both options are negligible. Although Option 1 (status quo) was intended to allow escapement of juvenile flatfish, recent development of the pelagic rope trawl allows this escapement even if fished so that the footrope touches the sea floor. Diameter of the pelagic trawl footrope no longer has any biological implications.

There are socio-economic effects, however. Under Option 1 innovation by fishermen and manufacturer in developing more effective gear is discouraged. Option 1 also is also more expensive than Option 2, because maintenance costs are higher. A 1.75 inch diameter footrope is not as durable as a larger footrope, particularly if made of chain, This adherence to the 1.75 inch footrope provision requires greater maintenance, time and cost but without biological benefits.

Under Option 2 the only physical constraints on pelagic trawls, other than mesh size, is to make fishing on-bottom impractical by prohibiting rollers, bobbins, or other features that would facilitate their use on the bottom. Option 2 would allow experimentation with pelagic trawl footrope specifications and thus allows fishermen and trawl manufacturers flexibility in achieving maximum gear efficiency. Option 2, however, may make it easier to develop a "pelagic" trawl of small mesh feasible for use on the bottom. Under this option, pelagic trawls are the same as bottom trawls except for mesh size.

Interaction With Other Amendment Issues: There is no interaction between Issue 6 and the other issues considered in this amendment.

Recommendation: The Council preferred Option 2.

FMP Reference: Section 1.4.1.1.(3) Pelagic Trawls (page 1-8 of the FMP dated January 1982)

ISSUE 7. Separate (Numerical OY) Management for Northern Jack Mackerel

Interest in a joint venture target fishery for large jack mackerel (Trachurus symmetricus) in 1983 spurred the Council to reconsider the management strategy for this segment of the stock. Jack mackerel taken north of 39° N. latitude (referred to as northern or large jack mackerel) are currently managed in the FMP in the multi-species complex of groundfish. The multi-species complex does not have a numerical designation of OY. By definition, fish in this complex are too closely associated to allow a major foreign or joint venture target fishery on any one species without harvesting unacceptably high levels of other species which are fully utilized by domestic shore-based processors. As a result, there currently are no estimates in the FMP for joint venture processing (JVP) or for total allowable levels of foreign fishing (TALFF) for jack mackerel. In this amendment, the Council is examining whether the segment of jack mackerel taken north of 39° N. latitude is more appropriately managed with a numerical OY and thus potentially available for joint venture or foreign exploitation.

Background

Jack mackerel range widely throughout the northeastern Pacific. Small jack mackerel (generally smaller than 457 mm in fork length and no more than 8-years-old) typically are found near the coast and islands and over shallow banks, and appear to be most concentrated in the California Bight. Older, larger jack mackerel are generally found offshore, only rarely appearing in inshore waters to the south. The relationship between the offshore (large fish) and onshore (small fish) components of the population is uncertain. Each segment is exploited by very different fishing operations; small jack mackerel are taken predominantly in the wetfish purse seine fishery (in association with non-groundfish species), whereas large jack mackerel are available to trawl and other gear and have been taken incidental to Pacific whiting fisheries. Accordingly, only the segment of jack mackerel north of 39° N. latitude is covered by the FMP.

Status of Stocks. The MSY is not well defined for the jack mackerel population. The ABC for the northern component of jack mackerel is set in the FMP at 12,000 mt, at the low end of the 12,000-27,000 mt approximation of MSY. It is appropriate to set ABC conservatively. The MSY estimate is tentative at best and the interactions between large and small jack mackerel and their roles in the ecosystem are uncertain.

Exploitation. Foreign fishermen had the opportunity to target on large jack mackerel in 1977 and 1978 when the TALFF was set at 4,000 mt under the Preliminary Fishery Management Plan (PMP). Only half the TALFF of large jack mackerel was harvested in the most productive year. It is unclear whether unfavorable markets, fish availability, non-selective fishing, or other more desirable fisheries dampened the foreign interest in targeting on jack mackerel. After 1978 these fish only were taken incidentally to other fisheries. Lack of information and minimal demand for northern jack mackerel explain its inclusion in the multi-species complex in the FMP. However, the experience of the foreign directed fishery on large jack mackerel indicates that this segment may be harvested selectively and may be appropriately managed separately and assigned a numerical OY.

In 1983, a joint venture company requested an allowance of 6,500 mt of large jack mackerel. Although a JVP allowance could not be designated without a numerical OY, the Council recommended an interim measure until this amendment could be analyzed. This interim recommendation proposed increasing the incidental retention percentage for jack mackerel taken in the Pacific whiting joint venture to 10% which would raise the overall joint venture retention allowance to 10,000 mt. This request subsequently was withdrawn although some interest continues. To date, northern jack mackerel have not been available for JVP, and retention of incidentally caught jack mackerel has been well below levels allowed in the FMP.

The domestic shore-based fishery for northern large jack mackerel is not significant; slightly over 150 mt were landed in 1982. Most domestic catches of northern jack mackerel have been incidental to trawl and troll operations (domestic effort has been concentrated in the purse seine fishery for small jack mackerel, predominantly in the Conception area, south of 36° N. latitude). Major development of the shore-based jack mackerel fishery north of the Conception area is not anticipated in the near future.

Options

Option 1. (Status quo.) Multi-Species Management of Northern Jack Mackerel

Option 1 assumes that northern jack mackerel is not appropriate for single species management because it is not harvested selectively to any major extent or because data are insufficient. It also assumes that adequate management of this stock is possible through the points of concern mechanism outlined in the FMP, and that it may be preferable in some instances to allow fishing above ABC. This option also reserves the jack mackerel harvest for shore-based operations alone.

Option 2. Separate (numerical OY) Management for Northern Jack Mackerel

Option 2 assumes that northern jack mackerel can be harvested selectively and that data are adequate to inititate single-species management.

Under Option 2, a numerical OY is assigned and TALFF and JVP would be determined annually (near January 1) and reevaluated mid-season (near August 1 as is done for other numerical OY species). A JVP allowance could be designated only for that amount of OY surplus to the needs of shore-based processors. A TALFF could be allowed only for that amount of OY surplus to the needs of the domestic industry, shore-based and joint venture. If a TALFF were designated, a reserve set at 20% of the OY would be established to allow for uncertainties in estimates of stock size and domestic needs by providing a buffer for the domestic industry should its needs exceed initial estimates.

Initially OY would be equal to the ABC specified in the FMP (12,000 mt) in order to test the appropriateness of ABC. Domestic annual processing (DAP) initially would be set at 2,000 mt (ranging from 0 to 12,000 mt) as determined by the July 1983 in-season survey of shore-based processors. JVP initially would be set at 10,000 mt based on the management measure proposed by the Council (in March 1983) to allow an incidental retention allowance of 10% (10,000 mt) for jack mackerel taken in the Pacific whiting joint venture. Incidental retention percentages initially would be the same as for the

Pacific whiting joint venture but could be modified according to 50 CFR 611.70(d)(3) (and thus, when better data are available, could differ from incidental percentages in the whiting joint venture). The incidental percentage for Pacific whiting initially is set at 3% (the same as for jack mackerel taken in the Pacific whiting joint venture fishery) and also may be modified according to 50 CFG 611.70(d)(3). Because OY would be assigned entirely to domestic fishermen, no foreign fishing would be allowed in 1984 (TALFF = 0). Differences in the initial distribution of OY under Options 1 and 2 are compared in Table 7-1.

Table 7-1. Specifications for jack mackerel taken north of 39° N. latitude (in metric tons).

	Option 1 (Status quo)	Option 2
MSY	12,000 - 27,000	12,000 - 27,000
ABC	12,000	12,000
OY	All taken with legal gear	12,000
DAH	All taken with legal gear	
Range	-	0 - 12,000
1984 season	-	12,000
DAP	All taken with legal gear	
Range	-	0 - 12,000
1984 season	-	2,000
JVP	None	
Range	-	DAH minus DAP
1984 season	-	10,000
TALFF*	None	
Range	-	OY minus (DAH and reserve)
1984 season	-	0

* If TALFF is available, a reserve of 20% OY would be established to assure domestic needs may be met.

Impacts

Neither option will have significant or negative biological impacts on the resource or harm the environment. The direct biological impacts are related to the concept of quota management. With a non-numerical OY (Option 1-status quo), jack mackerel landings would not be limited by a quota and potentially could be fished at levels above ABC and MSY. Exceeding the ABC of some species and underfishing others is an inherent aspect of multi-species management which aims to obtain optimum productivity from the complex as a whole. By removing jack mackerel from the multi-species complex (Option 2), a quota

(OY) is established which may not be exceeded. Because OY equals ABC, and is set at the conservative end of the MSY range, achievement of OY should have no direct, negative repercussions on productivity of the jack mackerel resource.

Indirect biological effects of Option 2, although not known with certainty, are expected to be slight, with no negative impact on any other resource. Expansion of any fishery involves higher levels of incidental catches than if the fishery were not expanded. The incidental percentages used in the foreign and joint venture fisheries for Pacific whiting would be used until better data become available. (Even though TALFF was designated in 1977-78, the amounts of jack mackerel taken in the target fishery cannot be separated from those taken incidental to the foreign whiting fishery. Thus, estimates of incidental catches in a jack mackerel target fishery are not available from those years.) By applying these percentages to the entire OY it is clear that the magnitude of incidental catches would be kept at biologically insignificant levels (Table 7-2). Although incidental percentages for this joint venture would apply to retention rather than receipt, large discards of incidental species are not expected.

Table 7-2. Incidental allowances[1/] associated with foreign or joint venture target fishery on jack mackerel north of 39° N. latitude (Option 2) (in metric tons).

	Species	OY	Incidental Retention Percentage	Incidental Allowance
Target:	Jack mackerel	12,000	-	-
Incidental:	Flatfish	Non-numerical	0.1%	12
	Pacific ocean perch	1,550	0.062%	7
	Rockfish (excluding POP)	Non-numerical[2/]	0.738%	89
	Sablefish	17,400	0.173%	30
	Other fish	Non-numerical	0.5%	60
	Pacific whiting	175,500	3.0%	360

1/ Foreign allowances based on receipt; joint venture allowances based on retention.
2/ The harvest guideline quota in 1983 was 18,500 mt.

Option 2 also could indirectly effect the management of other species. Northern jack mackerel currently have an ABC of 12,000 mt, 12% of the summed ABC for the multi-species complex (those species without a numerical OY), and almost half the ABC for "other fish" within the multi-species complex. Exclusion of northern jack mackerel from these summed ABCs allows more realistic harvest guidelines for the other species in the multi-species complex.

The major socio-economic difference between the two options is one of fishing opportunity; Option 2 would allow the possibility of joint venture target fishing on northern jack mackerel and Option 1 would not. Joint venture operations would be considered only after shore-based domestic needs are met and

would be within OY. Successful joint venture fisheries would encourage development of new markets and provide employment for domestic fishermen. Traditional groundfish resources are nearly fully utilized, and alternate fisheries are needed. Neither option precludes development of a shore-based fishery for northern jack mackerel. In fact, refinement of the fishing technology through experience in the joint venture may make this underutilized resource more attractive to shore-side processors.

Option 2 also would open the door to potential foreign fishing but only if OY were surplus to domestic needs. A TALFF was designated in 1977-1978 but was not enthusiastically exploited. There is no indication that TALFF would be available in the foreseeable future.

As many as 20 U.S. mid-water trawlers annually have been involved in the Pacific whiting joint ventures and some of these vessels are likely to be involved in a new fishery for northern jack mackerel should markets develop. The ex-vessel price for jack mackerel taken in joint ventures has not been established. However, if it is assumed that the entire JVP of 10,000 mt is taken, and the 1982 average shoreside price of $0.086 lb. is paid, then a maximum of $1.89 million in ex-vessel revenues could be realized by the domestic joint venture fleet. The gear type (pelagic trawl) and area (north of 39° N. latitude) are the same as for traditional foreign and joint venture fisheries for Pacific whiting. The fishing effort, number of processing vessels, and days on the grounds are expected to be substantially less, however, well below the levels of foreign involvement in the Pacific whiting fisheries. Allowances are set, as for the Pacific whiting fisheries, to limit catches of incidentally caught fish. Grounds preemption, gear conflicts, and incidental catches from a new joint venture fishery on northern jack mackerel are not expected to impede other domestic operations.

Both options are compatible with the FMP, but Option 2 would be more consistent with the FMP's definition of a numerical OY if, in fact, jack mackerel can be caught selectively. The FMP assigns a separate numerical OY to species which are usually harvested selectively. Northern jack mackerel had been included in the multi-species complex because, at the time of FMP development, most of the recorded landings were taken incidental to other groundfish fisheries. However, if northern jack mackerel can be selectively harvested, and interest in doing so exists, separate management is consistent with the management regime for other species established in the FMP. Designation of a numerical OY (Option 2) allows controlled development of an underexploited resource about which relatively little is known. Data obtained from an expanded and controlled fishery should improve the MSY and ABC estimates for northern jack mackerel without jeopardizing the productivity of any resource. Large-scale directed joint venture fishing as allowed under Option 2 could provide fishery and biological information which otherwise are difficult to obtain.

Interaction with Other Amendment Issues: There is no interaction between Issue 7 and other issues considered in this amendment.

Recommendation: The Council preferred Option 2.

APPENDIX A
ENVIRONMENTAL ASSESSMENT OF THE FIRST AMENDMENT TO THE PACIFIC COAST GROUNDFISH FISHERY MANAGEMENT PLAN

INTRODUCTION

After four years of development, the Pacific Coast Groundfish Fishery Management Plan (FMP) was approved (except for one provision) by the Assistant Administrator for Fisheries, NOAA on January 4, 1982. A draft Environmental Impact Statement (EIS) was filed with the Environmental Protection Agency (EPA) on November 23, 1979. It was modified when the FMP was revised and submitted to EPA as a draft supplemental EIS on December 24, 1980. The final supplemental EIS was submitted to EPA with publication of the proposed implementing regulations. The notice of availability of the final SEIS was published by EPA on February 12, 1982 (47 FR 6483).

The Pacific Fishery Management Council (Council) has prepared the first amendment to the FMP. An environmental assessment (EA) of this amendment is developed according to 40 CFR 1501.3 and 1508.9 and NOAA Directive 02-10 in order to determine whether an EIS must be submitted as stated in Section 102(2)(C) of the National Environmental Policy Act (NEPA). An EIS normally is required for any major action that will have a significant impact on the quality of the human environment. Otherwise an EA provides sufficient analysis if accompanied by a finding of no significant impact.

Seven separate issues are included in the first amendment. For simplification, the Council included the analysis of the potential environmental impacts in the discussion of alternative options for each issue. Each of the seven issues is listed in Table A-1, followed by the page numbers of the amendment on which the information relevant to an EA are found. The Summary of Environmental Impacts in this appendix consolidates the information from the more detailed discussions included with each issue. Thus, this appendix either contains or references the information required for an EA which was used as the basis for a finding of no significant environmental impact. The Council sought public comment on the amendment, the environmental assessment, and the finding of no significant impact.

CHOICE OF ISSUES AND PREFERRED OPTIONS

Issues potentially requiring modification of the FMP were identified at various Council meetings after the FMP was approved and at a public scoping session held on March 16-17, 1983. The Council selected a preferred course of action (e.g., a preferred option) for some issues at its June 8-9, 1983 meeting but decided to wait until public hearings had been held before selecting preferred options on the other issues. By the Council's January 11-12, 1984 meeting preferred options had been selected for all other issues (Table A-1). The discussion of environmental impacts in the amendment covers the range

of possibilities provided for each issue, not just the impacts of a preferred option, so the extreme options have been considered. In those cases in which the status quo (as set forth in the FMP) represents one extreme, analysis may be less rigorous because that action had already been considered in the SEIS for the FMP.

SUMMARY OF ENVIRONMENTAL IMPACTS

None of the alternatives proposed for any of the issues in this first amendment jeopardize the productive capability of a stock of fish, allow substantial damage to any ocean habitat, have any substantial adverse impact on public health or safety, adversely affect an endangered or threatened species or a marine mammal population, or are expected to result in cumulative effects that could have a substantial effect on the target resource species or any related stocks. The impacts of even the most severe options for these seven issues, considered separately or together, would not have a significant impact on the quality of the human environment. The basis for these conclusions is summarized below.

BIOLOGICAL IMPACTS. Implementation of any option or set of options presented in this amendment would not have a significant biological impact, direct or indirect. More complete discussions in the amendment are referenced in Table A-1.

Increased Landings. In two issues (Issue 1 - flexibility in regulatory regime for Pacific ocean perch (POP) and Issue 7 - separate (numerical OY) management of northern jack mackerel), the harvest guidelines (which equal ABC) have not been achieved under the status quo and the alternative options encourage full utilization. The direct biological effect of amending the FMP for these issues would be to increase landings of the target species without exceeding ABC. Thus any increase in landings of Pacific ocean perch and northern jack mackerel resulting from this amendment would be within the biological limits established in the FMP and would not jeopardize the productive capability of these stocks.

The indirect biological effects of these two issues involves the increase in incidental catches resulting from increased effort in a target fishery, and the potential diversion of vessels, and thus decreased effort, from other fisheries. Pacific ocean perch and jack mackerel can be harvested fairly cleanly and thus incidental catches should be small. The incidental allowances suggested in joint ventures for jack mackerel are very low and would not threaten any resource (Table 7-2).

The extent that these fisheries would attract new participants or divert effort from other fisheries is not known but is not expected to be large in the short term. Landings of Pacific ocean perch were only 694 mt below OY in 1982; achieving OY would not accommodate a large influx of vessels. A jack mackerel joint venture could employ some of these vessels. But the extent that vessels might be diverted away from Sebastes rockfish or sablefish fisheries (both considered biologically stressed in 1983) is unknown. Thus, the increase in landings possible under Issues 1 and 7 would not necessarily relieve the fishing pressure on any stressed stock of fish. Ironically, the long term effect of encouraging expansion of jack mackerel and Pacific ocean perch fisheries might be to attract entry of new vessels which eventually will

participate in other fisheries as well, and subsequently increase the exploitation and likelihood of stress on fully-utilized groundfish species.

Fishing Mortality. Options 2 and 3 for Issue 5 (whether to impose a trip limit on sablefish as the OY is approached) could change the allocation of landings among user groups but the total harvest levels would not be significantly affected. Neither option changes the quota for sablefish. Although the disposition of incidentally caught fish could change (a longer closed season would result in more discards relative to landings), incidental catch levels would not be significantly affected by either of these options.

Lost Gear. The options presented in Issue 2 (marking requirements for fixed gear) would have no quantifiable biological effect, direct or indirect, on any stock of fish. The marking requirements in the FMP -- buoys on both ends of a groundline and intermediate mile markers -- were intended to minimize gear conflicts and loss by making fixed gear more visible. The biological implication was that lost or unretrievable gear might fish indefinitely. (Pots are equipped with biodegradable escape panels to reduce uncontrolled fishing by lost gear.) The expense of such losses to fishermen, not to mention the inconvenience and time lost from gear conflicts, provide strong incentives to fishermen to minimize these losses. Although the least restrictive option (Option 3, requiring marking on only one end of a groundline) might make fixed gear less visible than the most restrictive option (the status quo), state regulations imposed before the FMP was implemented were even less restrictive and were not correlated with notable impacts on any stock of fish. Consequently, biological ramifications of this issue are expected to be insignificant.

Issue 2 is the only issue in the amendment which effects the physical environment. Although some fixed gear may be lost if marking requirements are made less restrictive, widespread degradation of the physical environment will not result from any option presented in Issue 2.

Vessel Identification. There are no biological implications associated with Issue 3, which analyzes the need for vessel identification.

Including More Species in the FMP. Biological impacts of adding species to the management unit (Option 2 of Issue 4) would be positive, but insignificant. The unregulated species considered are unavoidable in many groundfish fisheries and currently are taken in small quantities although some show promise of future market development. By excluding these species from the management unit (Option 1 - status quo), they would not be subject to the points of concern mechanism in the FMP which provides the means to alleviate stress on stocks if overfishing should occur.

The indirect biological effects of this issue concern incidental catches of species that are biologically stressed. Some of the unregulated rockfish are caught together with the Sebastes complex of rockfish which is managed by the FMP. Trip limits were imposed on landings of the Sebastes complex in 1983 to reduce fishing pressure and stress on these fish. However, the regulated Sebastes currently are caught incidentally (and discarded) in the course of unlimited target fishing for the unregulated species. There is no way to assess the total amount of fishing mortality due to these incidental catches; fishermen are reluctant to share such information. However, there are some

reports of vessel discards of regulated species exceeding landings of unregulated species. Although these discards are not yet believed to be large or responsible for stressing the regulated Sebastes complex (these fisheries are a relatively new development), further fishing mortality clearly does not benefit an already stressed resource. Option 2 would lessen this incidental catch problem by incorporating previously unregulated Sebastes species into the regulated Sebastes complex. Thus, unlimited fishing on certain species at the expense of others could be controlled and the concept of multi-species management could be more realistically and effectively applied.

Gear Modification. The pelagic trawl footrope requirement (Issue 6) was instituted to prevent the use of pelagic nets on the sea floor because juvenile flatfish would be susceptible to the 3 inch mesh. It was believed that a footrope and lashing less than 1.75 inches in diameter would be too weak to withstand dragging on the ground and the net would tear. However, the design of pelagic trawls evolved after the FMP was approved. The "rope wing" pelagic trawl now commonly used has a space between the footrope and webbing which allows juvenile flatfish to avoid the net. Thus, even if fished on the bottom, interception of juvenile flatfish by pelagic trawls would be negligible. Consequently, the 1.75 inch footrope requirement (status quo) which was intended to have a direct and positive biological impact applies to a gear design that is no longer common. The inclusion or deletion of this footrope requirement will have no biological effect.

IMPACTS ON THE HUMAN ENVIRONMENT. All the options considered as alternatives to the status quo for the seven issues are either to the economic benefit of the fishing industry or have minimal or no socio-economic impacts. No option, alone or combined with other options, imposes a significant cost (as defined by Executive Order 12291) on industry when compared with the status quo. The benefits from retaining the status quo, however, may be more costly than the alternative options in some issues. The basis for these conclusions is summarized below. More complete analyses of these impacts are in the discussions of each issue (referenced in Table A-1) and in the Regulatory Impact Review (Appendix B).

Income. Issues 1 and 7 could generate limited additional income for the groundfish industry by encouraging expansion of the fisheries for Pacific ocean perch and northern jack mackerel, respectively, all which have been fished below ABC or OY. However, the available increase in landings of Pacific ocean perch was less than 700 mt in 1982, which would generate only about $300,000. Northern jack mackerel landings have been a little more than 1% of ABC. Target fisheries for jack mackerel north of 39° N. latitude are expected to be limited, at least initially. The ex-vessel revenue accruing to the fleet from a joint venture on northern jack mackerel is not projected because the success of this venture, and the fishing effort cannot be estimated. Individual trawl vessels, however, could clearly benefit from the increased opportunity to market this underutilized species. Less than 20 domestic mid-water trawl vessels are expected to operate. Since fisheries for Sebastes species not in the management unit are not well developed, inclusion of these species (Option 2 of Issue 4 - adding species to management unit) would not have a major economic impact on the groundfish industry.

Direct Costs. Any amendment to Issue 2 (marking requirements for fixed gear), Issue 3 (vessel identification), or Issue 6 (pelagic trawl footrope size) would reduce direct costs to fishermen.

The alternatives to the status quo in Issue 2 propose fewer fixed gear markers. Option 2 would save each vessel approximately $132-$182 per one mile groundline marker and Option 3 would save that amount plus $147-$207 for one terminal end marker. These are not necessarily annual costs since markers may last longer or shorter than one year. (The regulation requiring one mile markers has not yet become effective but marking of both terminal ends has been imposed, with incomplete compliance, since January 1983).

Similarly, if the vessel identification requirement of Issue 3 were rescinded, the fishing fleet would save the cost of annual maintenance, which should be well below the estimates of painting the numbers the first time, about $175 per vessel and $62,000-$291,000 for the fleet. Most vessels already incurred the initial inconvenience and cost of painting on numbers when the regulation was implemented in January 1983.

Amending the pelagic trawl footrope requirement (Issue 6) could reduce gear costs by allowing fishermen to use larger and more durable materials than the currently required footropes of 1.75 inch (or less) diameter.

Enforcement. Effectiveness (and potentially cost) of enforcement are factors in Issue 3 (vessel identification) and Issue 4 (adding species to the management unit). Enforcement officials from the National Marine Fisheries Service and the U.S. Coast Guard maintain that the vessel marking requirements make identification easier at sea and from the air (reducing the need for multiple fly-overs) and minimize the confusion of citations issued to vessels with the same name. Most vessels have complied with the vessel identification regulation which became effective January 1, 1983.

Any change to the status quo in Issue 4 (adding species to the management unit) would provide more efficient and cost-effective enforcement and simplify compliance. The status quo requires enforcement officials (and fishermen) to distinguish which of more than 60 species of rockfish may be legally retained, a time consuming and contentious task. Enforcement officials estimate that the time to conduct a routine boarding could be cut in half if all Sebastes species of rockfish were included in the management unit (Option 2).

If joint venture or foreign fisheries are developed for jack mackerel (Issue 3), the Coast Guard and NMFS may need to commit additional enforcement resources for monitoring. The number of foreign vessels involved will determine the extent to which additional enforcement resources are necessary to ensure compliance with the regulations. The incremental cost to the federal government is not expected to be great since few foreign vessels are likely to participate in 1984 and the regulations are similar to those in effect for Pacific whiting operations.

Allocation. The economic impacts associated with Issue 5 depend on the relative availability and ability of user groups to compete for certain species of fish and the length of closed seasons, and thus cannot be quantified with any certainty.

Issue 5 examines whether the sablefish fishery should be slowed (by imposing trip limits) before OY is reached and if so, the allocation between fixed and trawl gear. The status quo prohibits further target fishing after 95% OY is reached and thus terminates the fixed gear fishery but allows trawl landings to continue, to the economic advantage of the trawl fleet. Option 2 would treat both fixed and trawl gear alike, consistent with management of the other numerical OY species; once OY is reached, further landings by all gear would be prohibited. However, this option would result in the longest closed season since fishing effort would not be slowed as OY is approached. Option 3 slows landings by imposing a trip limit on trawls when 90% of OY is reached and divides the remaining 10% into equal quotas for fixed gear and trawls. The income generated from 5% OY does not provide a major economic benefit to either trawlers or fixed gear fishermen. Although the three options would slightly shift the advantages between trawl and fixed gear, the overall amount in question is small (5% OY equals 870 mt in 1984). Thus, no significant loss or gain to any user group is evident.

The implications associated with length of closed season in Issue 5 are debatable, depending upon whether industry and consumers are better served with smaller production and continuous markets or by disrupted markets and greater levels of production for a shorter time.

Administration. Whenever new procedures are adopted or old procedures refined, some incremental cost of administering the procedures may be incurred. Modifying the management regime for Pacific ocean perch so that OY may be achieved (Issue 1) is not likely to occur more than once a year (although it could be more often), and could be combined with other in-season or between-season actions. Similarly, implementing a trip limit to slow landings of sablefish before OY is reached (Issue 5) could impose additional administrative costs. Option 3 would require separate monitoring and quotas for fixed gear and trawls taking the last 10% of the OY. However, announcing the quotas at 90% OY (Option 3) should be no more cumbersome than imposing trip limits at 95% OY (Option 1, the status quo); one Federal Register notice, costing about $500 to prepare, is required. Option 2 would slightly reduce the administrative burden by not requiring these announcements. Also, under Option 3, less than $1,000 would be needed to modify computer programs to segregate sablefish landings by gear type.

Safety. The only issue with safety implications is Issue 2. The status quo in the FMP (Option 1) requires marking both terminal ends and intermediate miles of groundlines. This provision has not yet been implemented due to the public request for further review. Some fishermen fear that if groundlines must be marked each mile (Option 1 - status quo), the attaching lines could become caught in the propeller and be difficult to untangle. The lines also could take too much space when coiled on deck, hindering the movement of fishermen setting and retrieving gear and increasing the chances of accidents. Any change from the status quo (e.g., adoption of Options 2 or 3) would address this potential problem.

Interaction Among Issues. This amendment may be approved in whole, in part, or not at all. Each of the issues described in this amendment is independent of the others, and can be considered separately on its own merits. Thus the Assistant Administrator of the National Marine Fisheries Service could

disapprove that portion of the amendment dealing with any issue without jeopardizing the rationale, intensity, or context behind the impacts of any other issue considered in this amendment.

AGENCIES AND PERSONS CONSULTED

Representatives of the following agencies were consulted in the preparation of this environmental assessment:

California Department of Fish and Game;
Oregon Department of Fish and Wildlife;
Pacific Fishery Management Council;
Washington Department of Fisheries;
The National Marine Fisheries Service and the
U.S. Coast Guard.

FINDING OF NO SIGNIFICANT ENVIRONMENTAL IMPACT

For the reasons discussed or referenced above, it is hereby determined that neither approval or disapproval of any option presented would significantly affect the quality of the human environment in a way that has not already been contemplated in the SEIS for the FMP. Accordingly, preparation of a supplementary EIS on these issues is not required by Section 102(2)(C) of the NEPA or its implementing regulations.

_____ _____

Assistant Administrator for Fisheries, NOAA — Date

Table A-1. Issues in first amendment to the Pacific Coast Groundfish FMP (pages referencing requirements of an environmental assessment under NEPA).

Issue	Title	Need for Action	Alternatives (Options)	Impacts		Preferred Option
				Biological	Socio-econ	
1	Flexibility in the Regulatory Regime for Pacific Ocean Perch	1-1	1-1, 2	1-2	1-2	Option 2
2	Marking Requirements for Fixed Gear	2-1	2-1, 2	2-3	2-2, 3	Option 2
3	Vessel Identification Requirement	3-1	3-1, 2	3-4	3-2, 3, 4	Option 2
4	Inclusion of Additional Species in the Groundfish Management Unit	4-1	4-1	4-2	4-2, 3	Option 2
5	Imposing a Trip Limit on Sablefish as the OY is Approached	5-1, 2	5-3	5-3	5-3, 4	Option 3
6	Pelagic Trawl Footrope Requirement	6-1	6-2	6-2	6-2	Option 2
7	Separate (Numerical OY) Management for Northern Jack Mackerel	7-1	7-2	7-3	7-3, 4, 5	Option 2

APPENDIX B
REGULATORY IMPACT REVIEW/REGULATORY FLEXIBILITY ANALYSIS FOR THE FIRST AMENDMENT TO THE PACIFIC COAST GROUNDFISH FISHERY MANAGEMENT PLAN

I. Introduction

In compliance with Executive Order 12291, the Department of Commerce (DOC) and the National Oceanic and Atmospheric Administration (NOAA) require the preparation of a Regulatory Impact Review (RIR) and Regulatory Flexibility Analysis (RFA) for all regulatory actions which either implement a new fishery management plan or significantly amend an existing plan, or may be significant in that they effect important DOC/NOAA policy concerns and are the object of public interest.

The RIR/RFA is part of the process of developing and reviewing fishery management plans and is prepared by the Regional Fishery Management Council with the assistance of the National Marine Fisheries Service (NMFS), as necessary. The RIR provides a comprehensive review of the level and incidence of impact associated with the proposed or final regulatory actions. The purpose of the analysis is to ensure that the regulatory agency or Council systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost effective way. To ensure full compliance with the regulatory requirements (1) the RIR/RFA has been prepared for the Pacific Coast Groundfish Fishery Management Plan (FMP) to evaluate the costs and benefits of alternative management actions, consistent with E.O. 12291; (2) an evaluation of the positive or negative economic impacts on small business has been made, consistent with P.L. 96-354; and (3) any paperwork and reporting burdens have been identified to ensure that regulations are cost effective, consistent with P.L. 96-511.

II. Need for Amendment

The FMP was prepared by the Pacific Fishery Management Council (Council) under the provisions of the Magnuson Fishery Conservation and Management Act, as amended, 16 USC 1981 et seq. The FMP was approved by the Secretary of Commerce on September 30, 1982. The federal regulations implementing the FMP were published in the Federal Register on October 5, 1982 (at 47 FR 43964).

Experience in the first few months of management under the new FMP resulted in a public "scoping" session held by the Council on March 16-17, 1983 to determine what changes or adjustments might be needed in the FMP. As a result of this "scoping" session the Council selected nine issues to be considered for possible plan amendment. Each of the proposed issues gave rise to two or more management alternatives (options) described in the draft amendment. The Council selected preferred options for four of the nine issues at its June 8, 1983 meeting, but deferred making any selection for the remaining five issues until after public hearings were held on the amendment. None of the nine issues included for amendment consideration involved any change in the original objectives of the Groundfish FMP. After holding public hearings, reviewing reports and recommendations from the Groundfish Management Team, the Scientific and Statistical Committee, and the Groundfish Advisory Panel, and

taking public testimony in two Council meetings, the Council decided to amend the FMP for seven of the nine issues originally raised for consideration. At its November 9-10, 1983 meeting, the Council voted to retain the current regulations under which the fishing year for all species commences at the beginning of the calendar year. This action eliminated the commencement of the fishery year as an issue in this amendment to the Goundfish FMP. On January 11-12, 1984, the Council voted to retain the current prohibition of Pacific whiting joint ventures south of 39° north latitude, thus eliminating this issue also. The problems giving rise to the remaining seven issues are described in the remainder of Section II.

II.1. Flexibility in Regulatory Regime for Pacific Ocean Perch (POP)

The Council identified a problem involving the apparent lack of flexibility for Pacific ocean perch (POP) trip limit regulations. Current regulations for POP impose vessel trip limits of 5,000 lbs., or 10% of the total trip weight on landings of POP. In 1982, landings of POP under these trip limits fell well below the OY's levels established in the rebuilding schedule for the Columbia and Vancouver INPFC areas. A proposal was made to establish a more flexible regulatory regime for POP. Under this regime, trip limit restrictions could be modified or other management measures could be considered in order to allow fishermen to more closely harvest the entire OYs, while still maintaining the 20-year rebuilding schedule. Adoption of a flexible regime would benefit fishermen through increased POP landings.

II. 2. Marking Requirements for Fixed Gear

The Council and some industry representatives questioned the need for the current requirement that fixed gear groundline must be marked at mile intervals with a pole, flag, light, radar reflector, and each end must be marked with a pole, light, radar reflector, and a buoy clearly identifying the owner. The regulation relating to the one mile markers has been deferred by the Council until at least January 1, 1984. Fishermen testified that certain inefficiencies could result from the marking regulation and that on small vessels the extra marking gear posed a safety hazard. Handling time is reportedly increased, it is extremely dangerous if the mile-marker and line drift free and tangle in the propeller, and buoys and lines can be costly. Many fixed gear fishermen contend that less marking is more than adequate to allow vessels to identify fishing grounds.

II. 3. Vessel Identification Requirement

All groundfish fishing vessels must be clearly marked with official numbers as specified by the current regulations. Some vessel operators felt this regulation (1) is unnecessary because vessels are already identified with names and hailing ports, (2) may be difficult to comply with deck space is limited on many vessels, (3) should exclude commercial passenger fishing vessels and/or private recreational boats, and (4) will not necessarily improve the Federal Government's ability to enforce regulations. The Coast Guard and NMFS enforcement personnel indicate that these numbers should be displayed to allow for positive identification of vessels, because other exterior markings may not be visible from the air and vessel names are sometimes duplicated.

II.4. Inclusion of Additional Species in the Management Unit

Certain groundfish species were not included in the Groundfish management unit when the FMP was implemented. These unlisted species are target species of directed fisheries or they are taken incidentally in multi-species groundfish fisheries. Because trip limits on certain groundfish species have been implemented coast-wide, fishermen may be inclined to discard regulated species in favor of retaining unregulated species. Also, trip limits are difficult to enforce when agents must sort through landed catches to determine which species are regulated and which are not. Inclusion of additional groundfish species in the management unit would facilitate enforcement and help discourage unlimited targeting at the expense of currently protected species.

II.5. Imposing a Trip Limit on Sablefish as the OY is Approached

The existing sablefish catch regulations require that a trip limit (percentage of the landings by weight) will be implemented in a management area when 95% of the OY is reached in that management area. Some fixed gear fishermen contend that this limit is discriminatory, since fixed gear vessels which target on sablefish must totally cease fishing when the 95% limit is reached, while trawl vessels could continue to land incidentally caught sablefish until 100% of OY is landed. This became an especially vexing problem in 1982. More than 50% of total landings were made by trawlers and fixed gear operators felt that their target fishery could be eliminated during an important marketing period should the 95% OY level be reached earlier in the fishing year.

II. 6. Pelagic Trawl Footrope Requirement

The FMP specifies that the footrope, including seizing material that lashes the net's webbing to the footrope, must be 1.75 inches or less in diameter. This regulation was originally implemented to discourage illegal use of pelagic trawls with 3 inch codend mesh on the sea floor and thereby specifically protect immature flatfish stocks. This pelagic trawl footrope provision is now considered unnecessary by some fishermen because of changes in design features and accumulated experience in the use of pelagic trawls. The fishing industry has since adopted a new configuration for pelagic trawls which renders these nets ineffective in catching juvenile flatfish even if the net is fished on-bottom.

II. 7. Separate (Numerical OY) Management of Northern Jack Mackerel

A joint venture company expressed an interest in securing a JVP allocation for northern jack mackerel (Trachurus symmetricus) in 1983. The Council is reconsidering their management strategy for this segment of the stock in light of the possibility of establishing a separate numerical OY for this species. Large northern jack mackerel taken north of 39° N latitude are currently managed in the FMP as part of the non-numerical OY multi-species groundfish complex. As a result, there currently are no estimates of JVP or TALFF for northern jack mackerel. If this species is more appropriately managed with a numerical OY, then both joint venture and foreign exploitation are possible.

III. Methodology

Section IV presents an analysis of the economic impacts of the alternative options considered in each issue. The impacts will be evaluated with respect to changes in the harvesting, processing, and marketing sectors by departing from the status quo situation. That is, all benefits and costs are treated as increments or decrements relative to the baseline of maintaining the status quo. The analysis presented here relies on the results of data analysis presented in the Amendment. For a full discussion of the source of estimated impacts, refer to the pages in the Amendment indicated in the text below.

Under each issue the benefits of each option are described and quantified, as far as possible, in the Benefits section. The costs are similarly quantified in the Costs section. These are followed by a section entitled Total Impacts, which compares the net benefits (benefits less costs) of the options. In most instances there is limited quantitative information with which to derive or estimate benefits and costs. Some costs have been reasonably estimated, such as gear and supply purchases. However, estimates of changes in catch, effort, revenue, prices, sales, and market conditions for harvesters and processors are difficult to make given the dynamic nature of the groundfish fishery. Thus, much of the analysis will be a qualitative discussion of benefit and costs of proposed actions compared to current regulations.

To satisfy the requirements of E.O. 12291, the Regulatory Flexibility Act (P.L. 96-354), and the Paperwork Reduction Act (P.L. 96-511), the comparative impacts of options will be judged in terms of changes in the following variables:

1. Competition, employment, investment, productivity, exports, imports, and the cost of goods and services;

2. Level and incidence of compliance costs and reporting requirements incurred by small business, if any;

3. Additional information collecting costs incurred by the Federal Government to implement alternatives; and,

4. Monitoring and enforcement costs incurred by government agencies to ensure compliance with regulations.

In Section V, changes in the variables listed in number 1 above will be used to determine whether proposed options are major or non-major rules, as defined by E.O. 12291. A proposed regulation is a "major" action if the annual effect on the National economy is $100 million or more and there are significant adverse effects on the variables listed in number 1. For the purpose of evaluating cumulative regulatory impacts relative to the above criterion, two major alternatives are identified; (1) No action or maintaining the status quo option under each issue, and (2) implementation of the most extreme option under each issue.

Section VI presents an analysis of the impacts of proposed options on small business entities, as required by the Regulatory Flexibility Act. An evaluation of the additional paperwork burdens imposed on industry or the government is found in Section VII, as required by the Paperwork Reduction Act. Changes in monitoring or enforcement costs are identified in Section VIII.

IV. Comparative Analysis of Issues

IV.1. Flexibility in the Regulatory Regime for Pacific Ocean Perch (POP)

Two options were considered in this issue:

(1) Retain the 5,000 lb./10% trip limit regulation currently in force (status quo);

(2) Provide the flexibility to alter the trip limit provision or impose other restrictions which would maintain the 20-year rebuilding schedule.

The Council has selected Option 2.

IV.1.A. Benefits

Analysis on pages 1-5 and 1-7 estimate that the harvesting sectors could realize higher gross revenues from the landing of additional POP. By allowing the harvesting sector to more closely harvest the OY in the Columbia and Vancouver INPFC areas, approximately $300,000 in gross ex-vessel revenues could be gained (page 1-5). Processors would also benefit by producing and potentially selling more POP fillets. Had Option 2 been in effect during 1982, the estimated increase in gross revenue to processors would have been $500,000 (pages 1-5). Thus, the total increment in gross benefits is estimated to be about $800,000 in 1982 dollars by changing the status quo.

IV.1.B. Costs

Harvesting costs will increase to the extent that directed fishing on POP increases, however, the magnitude of this increase cannot be quantified. If the entire increase in catch is due to retention of incidentally caught POP, then harvesting costs will not change in the short run. The likely effect will be some increase in harvesting costs because a target fishery could be induced.

The processing sector will incur additional costs, which under conditions of full employment and full utilization of plant capacity, would approach the value of increased revenues. Since unemployment is generally higher in coastal communities where most of the processing occurs, the additional processing activity should employ labor where opportunity costs are substantially lower than the wages they would receive. Thus, the economic cost generated in the processing sector would be less than the benefits.

IV.1.C. Total Impacts

The maximum incremental benefits accruing to the harvesting sector will be about $300,000 in the short run. These short run benefits will eventually be dissipated by new investment in the fishery over the long run unless measures

are adopted limiting new investment. The local communities will also receive benefits in the form of higher local employment. Thus, total net benefits in the short run will be positive, although small under Option 2.

IV.2. Marking Requirements for Fixed Gear

Three options were considered by the Council:

(1) Groundline of traps or longlines to be marked every mile at the surface with a pole and flag, and either a light or a radar reflector. Both ends must be marked at surface with a pole and flag, light radar reflector, and buoy. (Status quo, although the mile marker portion of this regulation was deferred by the Council at least until January 1, 1984. Only the terminal ends of the groundline are required to be marked in 1983).

(2) Terminal marking of trap and longline groundline is required (as in Option 1), but delete one mile marking requirement.

(3) Only one end of trap and longline groundlines must be marked as in Option 1. The one-mile marking requirement is deleted.

The Council has selected Option 2.

IV.2.A. Benefits

By amending the FMP, industry would save the cost of supplies and equipment needed to comply with the one mile marking provision. These purchase costs are estimated on page 2-3 and in Table 2-1. A conservative estimate of the cost to mark four miles of groundline (both terminal ends plus three mile markers) for one vessel is $700-$960. The cost for the three mile markers ranges from $400-$550, or about 55% of the total expense. If all pot and longline vessels were fishing only one groundline per year, the industry could save $104,000-141,000 (1982 dollars) by marking only the two terminal ends (Option 2), assuming that marking equipment would be replaced each year. The savings under Option 3 is slightly higher since only one terminal marker would be required. A more realistic assumption is that pot and longline vessels fish more than one groundline, consequently the savings under Options 2 or 3 would be greater. This is not necessarily an annual benefit, because a groundline and markers may have a useful life of several years. The annual replacement costs cannot be estimated at this time. Another benefit would be to reduce the time required to deploy, haul and handle the mile-markers. Handling time could be decreased by 20% according to one fisherman testifying before the Council (page 2-2). To a pot or longline fisherman, increased hauling time impacts efficiency by reducing fishing time. A departure from the status quo could enable the fixed gear fleet to increase productivity.

IV.2.B Costs

The major cost of eliminating the present marking requirement would be to increase the probability of more frequent gear interactions, and increase the likelihood of lost or damaged gear (page 2-2). Many in industry, however, state that even if the one mile markers were eliminated, the incidence of gear conflicts between fixed and mobile gear would not necessarily increase. Industry cites that it is a common practice for fixed gear fisherman to broad-

cast gear locations, thus even in the absence of mile markers gear loss will apparently be small. Option 2 maintains the current regulations for terminal marking under which there have been no incidence of gear conflicts reported to the Council in 1983. Therefore the need for additional mile markers is questionable. Whether or not Option 3 would increase the probability of more frequent gear conflicts is unknown. A lost or damaged groundline and/or trawl net could cost thousands of dollars for even one vessel owner. Enforcement costs are not expected to increase either under Options 2 or 3.

IV.2.C Total Impacts

The incremental benefits to the harvesting sector are estimated to exceed the potential incremental costs by adopting either Option 2 or 3. Deletion of the gear marking regulation, although resulting in a small savings for each vessel owner, is unlikely to increase the danger of gear conflicts. Thus, incremental costs are assumed negligible. The difference in net benefits between Options 2 or 3 are not clear because of the uncertainty about gear interctions under Option 3. Option 2 does provide an additional safeguard (if one terminal marker is lost the other is available for recovery) at a small cost to industry.

IV.3. Vessel Identification Requirement

The Council considered three options:

(1) Operators of all groundfish vessels which are over 25 feet in length shall display the vessel official number on the port and starboard sides of the deckhouse or hull, and on a weatherdeck so as to be visible from above; the number must contrast with the background and be in block Arabic numerals at least 18 inches high for vessels over 65 feet in length and at least 10 inches high for vessels between 25 and 65 feet long (status quo).

(2) Only vessels engaged in commercial fishing for groundfish and over 25 feet in length must display identification as in Option 1. Commercial passenger fishing vessels and private recreational vessels would be exempted. All vessels which sell groundfish are affected.

(3) Delete marking requirement for all groundfish fishing vessels.

The Council has selected Option 2.

IV.3.A. Total Impact Analysis

This issue is analyzed from a cost-effectiveness point-of-view because a predetermined objective is desired -- ensuring that Coast Guard and NMFS surveillance activities are not hindered and regulations will be adequately enforced. That option which is the least costly way of achieving this specified objective is the most efficient.

Under Option 1 (status quo), the harvesting sector is assumed to have incurred the initial cost of compliance, estimated at $62,000-$291,00 per year (page 3-3). The annual expenses to maintain numerals should be small, since in most cases a brush and paint is all that is needed to keep numbers visible. Assum-

ing that a brush and some paint would cost each vessel $10 per year, total out-of-pocket annual costs under Option 1 (status quo) will be $11,660 for the 1,166 commercial vessels listed in Table 3-1, and at least $11,660 for the shrimpers, salmon trollers, crabbers, and private recreation boats not listed in the table, but subject to the regulations because they catch groundfish. In addition to out-of-pocket expenses, there would be the labor cost associated with repainting the numerals.

Option 3, by eliminating any identification requirement, would therefore save commercial and private vessel owners more than $23,320 annually. However, adequate enforcement of regulations governing area of catch and trip frequency would no longer be possible with current levels of air surveillance; adequacy could only be maintained by increasing the number of surveillance flights and patrols by Coast Guard vessels. Since Coast Guard vessels and aircraft are already fully utilized in essential activities such as drug enforcement, search and rescue, and fisheries enforcement, this would only be possible in the unlikely event of a budget increase specifically for fisheries enforcement. This would not be a cost-effective solution, since the cost of additional surveillance flights and patrols would far outweigh the $23,320 annual cost of marking the vessels.

Option 2 narrows the application of the identification requirement by excluding private and commercial recreation vessels. No records are kept on the number of private recreational vessels which fish for groundfish, but it is undoubtedly large compared to the 448 commercial passenger fishing vessels engaged in groundfish fishing in 1981. Thus, Option 2 would save a significant number of vessels the cost of maintaining their identification markings. On the other hand, since commercial fishermen account for approximately 90 percent of the groundfish taken, enforcement capabilities of government agencies would not be significantly reduced by exempting recreational vessels. Thus, there is no reason to expect a significant change in either the cost of enforcement or the effectiveness of management as a result of the Council's selection of Option 2.

IV.4. Inclusion of Additional Species in the Groundfish Management Unit

Two options were considered by the Council:

(1) No change in the number of species included in the management unit (status quo).

(2) Include in the FMP all species of the family Scorpaenidae occurring seaward of Washington, Oregon, and California, plus cabezon, kelp greenling, curlfin sole, and rock sole.

The Council has selected Option 2.

IV.4.A. Benefits

Benefits would accrue in the form of potentially reducing discard mortality of regulated species, simplifying enforcement activites at the dock, and ensuring that all groundfish species are subject to the FMP's point-of-concern procedure. Fishermen's tendency to differentiate between regulated and unregulated species would be diminished, thereby improving overall fishing efficien-

cy and compliance with existing regulations. No quantification of these benefits are possible with the data provided on pages 4-2 and 4-3. Discussion with NMFS enforcement officials does suggest that substantial savings in time and cost could be realized by amending the status quo. Agents would not have to sort through a landing to determine which species are regulated and which are not.

IV.4.B. Costs

The impact analysis on page 4-3 indicates that landings of new species proposed for inclusion in the FMP have been less than 1% in all species categories for the years of record. Consequently it was determined that no changes in MSY or ABC are necessary for any component of the multi-species complex. By not liberalizing the harvest quota for the Sebastes complex in the two northern INPFC areas, a closure could conceivably be reached earlier in 1984 because landings of new rockfish species are counted toward the overall Sebastes harvest quota in Vancouver and Columbia INPFC areas (18,500 mt in 1983). Industry could be prevented from landing those rockfish species for which ABCs are estimated in these two northern areas. The incremental cost would be roughly equal to the magnitude of the change in the aggregate ABC estimate for the Sebastes complex. Because landings of rockfish previously excluded from the FMP have been very small (page 4-3), the potential loss from a decrease in landings of Sebastes species is considered negligible. Another potential cost to fishermen is the loss in earnings by managing a previously unregulated species. Although no estimate is possible, there were very few landings of any species that exceeded the coast-wide Sebastes trip limit of 40,000 lbs. in 1983.

IV.4.C. Total Impacts

The incremental benefits resulting from increased enforcement effectiveness, reduction in discard mortality, and greater compliance with regulations are apparent by amending the status quo. No quantification of these benefits is possible. The incremental cost by adopting Option 2 is expected to be much smaller than the potential benefits because these species are primarily landed incidentally in the trawl fishery. There are a few instances in which an included species may be amenable to target fishing (i.e., black rockfish, S. melanops) in some areas at different times of the year but these exceptions are rare. Thus, the net impacts of Option 2 are determined to be positive.

IV.5. Imposing a Trip Limit on Sablefish as the OY is approached

The Council considered three options:

(1) (Status quo). A sablefish trip limit (percentage of the landing by weight) will be implemented in a management area (i.e., Monterey Bay or the Washington-California area) whenever 95% of the OY is reached in that management area. The trip limit will be established as the percentage of sablefish in all trawl landings which contain sablefish landed in that management area up to the time 95% of OY was reached. Sablefish trip limits so set will not in any case exceed 30% of the landed weight.

(2) The sablefish fishery will be closed in a management area when 100% of the OY is reached in that area. No incidental landings of sablefish would be allowed once the fishery is closed;

(3) When 90% of the OY is landed, an additional 5% of OY may be landed by vessels fishing fixed gear (pot or longlines). At the time 90% is landed, trawl vessels will be put on percentage trip limits equal to the percentage of sablefish in all trawl landings which contain sablefish. When additional landings by either gear type reach 5% of OY, further landings by that gear are prohibited.

The Council has selected Option 3.

IV.5.A. Benefits

The level of landings projected for the three options under conditions like those of 1982 are shown in Table 5-3 of the amendment, as are the ex-vessel revenues resulting from the landings. From these figures it can be seen that, for the 1983 conditions, Option 2 would have increased the fixed-gear fleet revenue by $275,533 per year, compared to Option 1. "Other gear" revenue would have declined by $6,829 per year, while trawl fleet revenue would have declined by $79,320 per year. Total gross revenue to the harvesting sector would, therefore, have increased by $189,384 per year. Option 3, on the other hand, would have increased the fixed-gear fleet revenue by $351,388 per year, would have decreased trawl fleet revenue by $110,451 per year, and left "other gear" revenue unchanged. Total harvesting sector revenue under Option 3 would have increased by $240,937 per year, which is $51,553 per year more than for Option 2.

Some reasonable speculation is possible about the effect of these options for conditions other than those of 1982. It is clear, for example, that all three options have the same zero effect on the fishery if, as in 1983, landings never reach 90 percent of OY during the entire year. If, on the other hand, the market for sablefish were to improve over 1982 levels, with no immediate change in abundance of the fish, then OY and 90 percent of OY would be expected to be reached sooner than in the examples analyzed. Under Option 1 this would result in no change for fixed gear (assuming each gear type maintains the same proportion of catch prior to achieving 95 percent of OY as in 1982) and an increase in the trawl landings of up to 171 mt, depending on how soon 90 percent of OY is reached. Under Option 2 the improved market conditions for sablefish would have no effect on the total landings by gear type (given the same assumption of constant proportions of the landings for the several gear types). Under Option 3 the fixed gear landings would remain constant, as in Option 1, while trawl landings would increase no more than 20 mt. Thus, an improved sablefish market would tend to reduce, but not eliminate, the differences between the options.
The increased production of fish under either Option 2 or Option 3 also would have generated additional revenue in the processing and distribution of fish, while the income generated by all these activities would have induced additional economic activity within the coastal economy. These effects cannot be quantified at this time.

IV.5.B. Costs

Options 2 and 3 result in higher catches for the fixed gear fleet because they allow more fishing time for fixed gear. Since this extra fishing incurs additional costs, these options result in incremental costs roughly proportional to the increased landings of the directed fishery. The amount of this incremental cost is unknown, but is less than the incremental income, or else fishermen would not bother to increase their fishing time. Since operating costs in a normal fishing year are probably less than 75 percent of total costs, and since the value of the fish caught must be at least equal to the total costs of fishing over the long run in a viable fishery, the additional costs due to increased landings under Option 2 and Option 3 are probably less than 75 percent of the value of increased landings, in the short-run, when interest costs, depreciation, and insurance can be considered as fixed costs. In the long-run (perhaps 10 or more years) fishermen will adjust their investment in the fishery in response to changes in expected income, so that in the long-run the induced increase in annual fishing costs will approximate the annual increase in fishing revenue. In the first few years, however, the harvesting sector is likely to experience cost increases of no more than $140,038 for Options 2 and $180,703 for Option 3.

Expanded economic activity in the coastal economies as a result of Option 2 or Option 3 would incur costs as well as the benefits described above. However, under the conditions of chronic underemployment typical of coastal economies which are not highly urbanized, the cost of additional resources employed would be substantially less than the value of increased production of goods and services.

Option 2 would provide a slight saving in administrative costs over Option 1 by requiring one less Federal Register notice to be published each year, at a cost of less than $500 per year to the government. Option 3 would involve slightly higher adminstrative costs than Option 1 due to a one-time programming change (costing less than $1,000) to enable landings to be reported by gear type.

IV.5.C Total Impacts

The net benefits of moving from the status quo of Option 1 to either Option 2 or Option 3 cannot be quantified precisely because of uncertainties concerning the degree to which production costs will increase as output in the harvesting and processing sectors increase, and because of uncertainties concerning market conditions and stock abundance in future years. However, the analysis based on 1982 conditions indicates that short-term net benefits to industry of adopting Options 2 or 3 would be substantially in excess of $47,346 and $60,234 per year, respectively.

Option 2 and Option 3 both tend to increase the high-valued catch of the fixed gear fleet while decreasing the lower valued catch of the trawl fleet, relative to Option 1. This effect is somewhat more pronounced for Option 3 than for Option 2.

IV.6. Pelagic Trawl Footrope Requirement

Two options were considered by the Council:

(1) (Status quo) Pelagic trawl nets must have unprotected footropes at the trawl mouth. Footropes must be 1.75 inches or less in diameter, including twine necessary for seizing material. Sweep lines, including the bottom leg of the bridal, must be bare.

(2) As in Option 1, except footrope diameter is not specified.

The Council has selected Option 2.

IV.6.A. Benefits

Option 2 would benefit vessels using pelagic trawls by allowing them to reduce maintenance costs and lost fishing time due to the greater durability of larger diameter footropes (page 6-2). By eliminating the footrope diameter restriction on pelagic trawl design, fishermen and manufacturers are allowed more flexibility in developing more effective gear (page 6-2).

IV.6.B Costs

Option 2 allows fishermen to voluntarily convert to larger footropes at their convenience. Thus, no additional costs are imposed on the industry by this option. Other incremental costs are expected to be zero unless the fishery develops a "pelagic" trawl which can be used effectively on the bottom.

IV.6.C. Total Impact

The reduced maintenance costs and reduced lost fishing time which would result from Option 2 are benefits with no offsetting costs. Therefore, the net benefit of Option 2 is expected to be positive.

IV.7. Separate (Numerical OY) Management of Northern Jack Mackerel

Two options were considered by the Council:

1. Northern jack mackerel shall remain in the multi-species management unit and not be assigned a numercial OY (status quo).

2. Northern jack mackerel shall be assigned a separate numerical OY.

The Council has selected Option 2.

IV.7.A. Benefits

The extent to which the domestic harvesting sector increases landings of jack mackerel provides an estimate of increased benefits. There is no indication of significant increase in shore-based production of northern jack mackerel in the near future. However, some joint venture interest has been expressed. A joint venture is possible only if the numerical OY exists and if fish are surplus to domestic shore-based needs. Under Option 2, the initial OY for northern jack mackerel is 12,000 mt and the estimate of shore-based production

(DAP) is 2,000 mt, leaving 10,000 mt available for joint venture processing (JVP). It is unlikely that the entire JVP will be filled in a first year joint venture fishery. The potential gain in ex-vessel revenues accruing to the domestic harvesting sector is estimated at $1.89 million (page 7-5) if the 10,000 mt JVP allocation is fully harvested in 1984. In addition, employment opportunities will increase for mid-water trawl vessels and fisherman in need of viable alternatives. Further benefits would be in the form of developing a previously underutilized resource and gaining knowledge about product forms acceptable in world markets, gear technology, technical processing requirements, and ultimately expansion of shore based processing of northern jack mackerel.

IV.7.B. Costs

The extent to which fishing effort increases as vessels search and fish for jack mackerel stocks will determine the relative increase in harvesting costs. In the short run, the increase in harvesting costs will be small, but will tend to be greater as profits attract new investment in the fishery in the long run.

IV.7.C. Total Impacts.

The benefits of managing northern jack mackerel as a separate species (by designating a numerical OY) are to potentially increase revenues, productivity, employment, and exports through development and expansion of joint ventures. The incremental costs will be small in the short run, but will increase in the long run so that all profits are eventually eliminated. However, the net benefits to industry are expected to be positive in the short run by adopting Option 2.

V. Impacts of Management Regime on Specific Areas of Concern

The changes to the existing management regime proposed in this amendment are contained in those options selected by the Council which deviate from the status quo. Since the Council chose not to make any changes with respect to commencement of the fishing year and extension of whiting joint ventures south of 39°, they are not included in the analysis of the impact of the proposed changes. The options comprising this change in the management regime are:

	Issue Number						
	1	2	3	4	5	6	7
Preferred Management Option	2	2	2	2	3	2	2

V.A. Competition

None of the selected measures will change the competitive structure of the West Coast groundfish fishery or restrict entry into the fishery.

V.B. Employment

Those preferred options potentially providing greater employment prospects for some U.S. fishing vessels, fishermen, and shoreside workers in processing plants are Issues 1, 5, and 7. Issues 2, 3, 4 and 6 have no significant

bearing on employment in the groundfish industry. When these options are taken together, the incremental impact on employment will be slight but positive.

V.C. Investment

The overall impact on investment will be small. Fishermen's investment in gear, materials and supplies needed to comply with the FMP would decline for options selected under Issues 2 and 3. Some additional investment would be induced by increased fishing opportunities resulting from options selected under Issues 1 and 7 in the long run. No change in investment would occur under Issues 4, 5, and 6.

V.1.D. Productivity

Small increases in productivity to the harvesting sector will likely result relative to the status quo from selected options under Issues 1, 2, 5, 6, and 7. Increased productivity can imply landing more fish and realizing higher gross revenues (Issues 1 and 7), or from reducing the time and effort to haul gear (Issues 2 and 6).

V.D. Cost of Goods and Services

None of the options are expected to have a measurable effect on the cost of goods and services for fisherman, processors, markets, or consumers.

V.E. Exports

The incremental impact on exports by implementing this management regime is expected to be positive. A small expansion of joint venture sales would be likely under Issue 7. There may be a small increase in sablefish exports by increasing fixed gear landings under Issue 5. No other issues will affect the level of exports.

V.F. Imports

None of the options will cause an increase in imports of groundfish products into the U.S. economy.

VI. Regulatory Flexibility Analysis

The proposed management regime potentially will have positive impacts on business entities in the groundfish fleet. The total impact is expected to be minor, although a small increase in joint venture landings could result in greater overall benefits for the domestic groundfish harvesting sector. This management regime would for the most part benefit all vessels in the short run by increasing flexibility in fishing operations, increasing landings and ex-vessel revenues, improving productivity, and reducing the overall regulatory burden.

The option which could potentially lead to an expanded joint venture for northern jack mackerel (Issue 7) will generate benefits for several mid-water trawl vessels.

Benefits may accrue to most groundfish vessels through the implementation of options under Issues 1, 2, 5 and 6. Commercial passenger fishing vessels will benefit by being exempted from the groundfish vessel identification regulation (Issue 3). Similarly, 257 fixed gear vessels (pot and longline) will benefit by not requiring one mile markers on fixed gear. The potential savings in cost per vessel will be small by departing from the status quo under Issues 2 and 3. Issues 1, 5 and 6 will potentially result in higher aggregate landings and therefore higher ex-vessel revenues for groundfish vessels. The impact per vessel by increasing Pacific ocean perch ex-vessel revenues by $300,000 is expected to be minor (Issue 1). The incremental increase in the annual gross revenue from sablefish landings by fixed gear is not expected to exceed $351,400, while gross revenues to trawl vessels will decline $110,500. Therefore, the average gross impact per vessel under Issue 5 will be small (estimated at approximately $1,367 per fixed gear vessel and $270 per trawl vessel). By removing the minimum footrope specification on pelagic trawl nets, trawl vessels could decrease their costs with no decline in revenues.

VII. Additional Record-keeping, Reporting, Paperwork and Rulemaking Costs, as Required by the Paperwork Reduction Act (P.L. 96-511).

Some slight modification of record-keeping could be required on the part of NMFS to record the progress of new joint venture fisheries for jack mackerel, but this should be less effort than required for the current Pacific whiting joint venture fishery.

VIII. Monitoring and Enforcement Costs to Federal Government

The options under Issues 3 (Vessel Identification) and Issue 7 (expansion of joint ventures for northern jack mackerel) may result in small increases in enforcement costs to the federal government. The additional vessel and overflight time that NMFS and Coast Guard would require to ensure that vessels can be positively identified cannot be estimated (Issue 3).

If joint venture or foreign fisheries are developed for jack mackerel, the Coast Guard and NMFS may need to commit additional enforcement resources to monitor these fisheries. The number of foreign vessels involved will determine the extent to which additional enforcement resources are necessary to ensure compliance with the regulations. The incremental cost to the federal government is not expected to be great, since few foreign vessels are likely to participate in 1984 and the regulations are similar to those in effect for Pacific whiting operations.

Some savings in enforcement time to monitor landings of unregulated groundfish species could be realized through institution of Issue 4, although no quantitative estimate of the benefit to the federal government is provided.

APPENDIX C
CONSISTENCY WITH FEDERAL AND STATE COASTAL ZONE MANAGEMENT PROGRAMS

Coastal Zone Management Act (CZMA)

The Coastal Zone Management Act of 1972 (CZMA) specifies at Section 307(c)(1) that "Each Federal agency conducting or supporting activities directly affecting the coastal zone shall conduct or support those activities in a manner which is, to the maximum extent practicable, consistent with approved state management programs."

The Magnuson Act specifies at Section 303(b) that "Any fishery management plan which is prepared by any Council or by the Secretary, with respect to any fishery, may...(5) incorporate (consistent with the national standards, the other provisions of this Act, and any other applicable law) the relevant fishery conservation and management measures of the coastal states nearest to the fishery."

Both the CZMA and the Magnuson Act establish policies that affect the conservation and management of fishery resources.

NOAA administers both the Magnuson Act and the CZMA. Moreover, it is NOAA's policy that the two statutes are fundamentally compatible and should be administered in a manner to give maximum effect to both laws. It is also NOAA's policy that most FMPs (and amendments of FMPs) constitute a federal activity that "directly affects" the coastal zone of a state with an approved coastal zone management program. NOAA recognizes that fisheries constitute one of the key resources of the coastal zone and that the preparation and implementation of FMPs to regulate fisheries in the FCZ could have a direct effect on the state's coastal zone because of the division of the fishery resources between the FCZ and state territorial and internal waters.

The CZMA and the Magnuson Act establish time frames for consistency review and approval of FMPs and amendments that are approximately equal. However, these time frames may, on occasion, cause procedural problems in coordinating consistency review and approval of FMPs or amendments.

NOAA regulations require that consistency determinations be provided to states with approved programs "at least 90 days before final approval of the federal activity unless both the federal agency and the state agency agree to an alternative notification schedule" (15 CFR 930.54(b)). Similarly, NOAA regulations encourage federal agencies to provide consistency determinations "at the earliest practical time" in the planning of an activity, "before the federal agency reaches a significant point of decision making in its review process" (930.54(b)). A state must indicate its agreement or disagreement with the consistency determination within 45 days from receipt of the determination. If the state fails to respond within 45 days, the state's agreement may be presumed. However, the state may request one 15-day extension before the expiration of the 45-day period, and the federal agency must comply. Longer extensions may be granted by the federal agency (15 CFR 930.41).

The Magnuson Act requires that the Secretary of Commerce review an FMP or amendment prepared by a Council and notify such Council of his approval, disapproval or partial approval within 95 days after he receives the FMP or amendment (P.L. 97-453).

The sections that follow summarize those portions of the Washington, Oregon, and California coastal zone management programs that may be relevant to the FMP and subsequent amendments, and the last section determines consistency between the first amendment to the FMP and these state programs.

Washington State Coastal Zone Management Program

The Washington Department of Ecology (DOE) is the lead state agency for implementation of the Washington Coastal Zone Management Program (WCZMP). The coastal zone boundary embodies a two-tier concept. The first or primary tier, bounded by the "resource boundary," encompasses all of the state's marine waters and their associated wetlands, including, at a minimum, all upland area 200 feet landward from the ordinary high water mark. The second tier, bounded by the "planning and administrative boundary," is composed of the area within the fifteen coastal counties which front on saltwater. The second tier is intended to be the maximum extent of the coastal zone and, as such, is the context within which coastal policy planning is accomplished through the WCZMP.

Management of the coastal zone is subject to the Shoreline Management Act and implementing regulations, the Federal and State Clean Air Act requirements, and the energy facility siting law. Together, these authorities establish priorities for permissibility of uses and provide guidance as to the conduct of uses of Washington's coastal zone. The emphasis of the program includes not only Washington coastal waters, but the shoreline jurisdiction throughout the 15 coastal counties.

The WCZMP provides a consistency review mechanism for federal activities affecting the coastal zone based on specific policies and standards. For federal activities requiring no permits, but having coast-wide implications (such as FMPs), the policies and standards addressed in the Shoreline Management Act of 1971 (RCW 90.58) and the Final Guidelines (WAC 173-16) provide the basis for determining consistency.

Shoreline Management Act.

The management goals in the Shoreline Management Act emphasize a balance between conservation and use of the shorelines. More specific priorities were given to "shorelines of state-wide significance" encompassing an area including Washington ocean waters and shoreline from Cape Disappointment on the south to Cape Flattery on the north, including harbors, bays, estuaries, and inlets.

The first amendment to the FMP is consistent with the following directives contained in the WCZMP concerning shoreline management:

(a) Recognize and protect the state-wide interest over local interest.

(b) Preserve the natural character of the shoreline.

This proposed FMP amendment should have no direct impact on the natural character of the Washington shoreline. The groundfish fishing regulations that are implemented as a result of this action will be effective outside of state territorial waters in the fishery conservation zone.

(c) Result in long-term over short-term benefit.

The FMP requires the annual consideration of long-term resource needs and short-term social and economic benefits. The determination of optimum yield balances these competing demands. Under the FMP, management measures may be imposed to alleviate biological stress on any stock of fish to assure that future productivity is not threatened. Ocean commercial fisheries off Washington have been curtailed in recent years in order to alleviate biological stress on certain stocks of groundfish. It is likely that commercial groundfish fisheries will continue to be restricted whether or not this amendment is approved in part or in its entirety. The only issues in this amendment directly affecting the harvest of groundfish (e.g., liberalizing trip limits on Pacific ocean perch and establishing joint ventures for jack mackerel) seek to increase landings to levels that would achieve the maximum sustainable yield over time. Thus, no option presented in this amendment would jeopardize the productivity of any stock of fish or would result in significant short-term economic gains at the expense of long-term benefits.

(d) Protect the resources and ecology of the shoreline.

The purpose of the FMP and subsequent amendments is to conserve and protect the groundfish resource for current and future use. The FMP amendment does not compromise this goal.

(e) Increase public access to publicly-owned areas of the shoreline.

The amendment to the FMP will not have any direct or indirect affect on public access to publicly-owned areas along the coastal zone.

(f) Increase recreational opportunities for the public in the shoreline.

The FMP amendment will not effect recreational fishing opportunities for the public in the shoreline.

DOE Final Guidelines.

The concept of preferred shoreline uses has been incorporated in DOE's final guidelines, with water-dependent uses clearly a priority over water-oriented or nonwater-oriented uses. The guidelines address uses compatible with (1) the natural environment, (2) the conservancy environment, (3) the rural environment, and (4) the urban environment. Of the 21 individual development policies in the final guidelines, three have relevance or potential relevance to the federal activity proposed in this amendment to the FMP.

(a) Commercial Development: Shoreline-dependent commercial development and developments which will provide shoreline enjoyment for a large number of people shall be preferred. New commercial activities shall locate in urbanized areas.

(b) Ports and Water-related Industry: Industry which requires frontage on navigable waters should be given priority over other industrial uses. Prior to allocating shorelines for port uses, regional and state-wide needs for such uses should be considered.

Although this amendment does not specifically address development of water-related coastal industry, the protection and enhancement of ocean resources may provide an incentive for shoreside commercial development. Numerous shoreside fish plants process groundfish that are caught in the fishery conservation zone. Some of the processors are dependent on the groundfish fishery and will be affected by regulatory decisions made under the FMP and subsequent amendments. Consideration of the economic viability of shoreside commercial developments that are dependent on groundfish fisheries is an important economic factor in the annual determinations of optimum yield by the Council.

One issue in this amendment considers development of joint venture operations (Issue 7 which discusses the appropriateness of an annual quota (OY) for jack mackerel and thus the possibility of joint venture expansion). This fishery would not increase fishing effort off the state of Washington or preclude development of competitive shore-based processing. However, Washington fishermen and shoreside industries supporting joint ventures could benefit from this fishery.

(c) Recreation: Priority will be given to developments which provide recreational uses and other improvements facilitating public access to shorelines. Water-oriented recreation is a preferred use along the shorelines, but it should be located and conducted in a way which is compatible with the environment.

The amendment does not specifically address shoreside recreational development, but again the conservation, protection and enhancement of ocean resources could provide an incentive for such developments.

Oregon State Coastal Zone Management Program

The Oregon program calls for consistency review for activities directly affecting the coastal zone, including air, water, scenic, living, economic, cultural and/or mineral resources of the coastal zone.

The basis for the Oregon program is the 1973 Oregon Land Use Act, ORS 197. Oregon's program relies on the combined authority of state and local governments to regulate uses and activities in the coastal zone. The principal components of Oregon's program are: (1) nineteen state-wide planning goals and supporting guidelines adopted by the Land Conservation and Development Commission (LCDC), the state's coastal zone agency; (2) coordinated comprehensive local plans prepared by local governments and approved by the LCDC; and (3) selected state statutes implemented by various state agencies. Local and state planning decisions must comply with the State-wide Planning Goals, which serve as the program's overriding standards until local comprehensive plans are developed and acknowledged by LCDC. Once acknowledged, the comprehensive plans supersede the goals as standards for state and federal planning and activities in the coastal zone. Coastal zone boundaries are generally defined to extend to the state's seaward limit (three nautical miles offshore) and inland to the crest of the coastal mountain range.

Table C-1 lists the state-wide planning goals and state regulations that have been examined for this analysis and categorizes them according to their particular relevance to the recommendations in the amendment to the FMP.

Table C-1. Oregon CZM planning goals and state regulations.

Category 1. Applicable Issues/Statutes

Goal No. 1	Citizen Involvement in Planning
Goal No. 5	Preservation of Open Space...and Natural Resources
Goal No. 8	Recreational Needs
Goal No. 16	Estuarine Resources
Goal No. 19	Ocean Resources
ORS 496.012	Wildlife Policy
ORS 506.109	Foodfish Management
ORS 506.201-506.211	Oregon Fish and Wildlife Management Planning

Category 2. Potentially Applicable Goals/Statutes

Goal No. 2	Land-use Planning
Goal No. 9	Economy of the State
Goal No. 17	Coastal Shorelands
ORS 184.033	Economic Development
ORS 777.835	Ports Planning

Category 3. Goals Relatively Inapplicable to the Proposed Action

Goal No. 3	Agricultural Lands
Goal No. 4	Forest Lands
Goal No. 6	Air, Water and Land Resources Quality
Goal No. 7	Areas Subject to Natural Disasters
Goal No. 10	Housing
Goal No. 11	Public Facilities and Services
Goal No. 12	Transportation
Goal No. 13	Energy Conservation
Goal No. 14	Urbanization
Goal No. 18	Beaches and Dunes

(a) The amendment is consistent with Goal 19, Ocean Resources, the most pertinent aspect of the Oregon Coastal Zone Program relating to groundfish managment. The overall statement of Goal 19 is:

"To conserve the long-term value, benefits and natural resources of the nearshore ocean and the continental shelf. All local, state, and federal plans, projects and activities which affect the territorial sea shall be developed, managed and conducted to maintain, and where appropriate, enhance and restore, long-term benefits derived from the nearshore oceanic resources of Oregon. Since renewable ocean resources and uses, such as food production, water purity, navigation, recreation and aesthetic enjoyment will provide greater long-term benefits than will nonrenewable resources,

such plans and activities shall give clear priority to the proper management and protection of renewable resources."

Guidelines for Goal 19 reflect concerns for awareness of impacts upon fishing resources, biological habitat, navigation and ports, aesthetic uses, recreation and other issues. The managements objectives that are expressed in the FMP and its amendment are consistent with the objective of Goal 19, the protection and conservation of ocean resources. Goal 19 emphasizes the long-term benefits that would be derived from the conservation and restoration of the renewable nearshore oceanic resources. The FMP emphasizes the need to establish management measures that will provide for the conservation and protection of groundfish stocks and will help rebuild some stocks that have been biologically stressed. None of the issues in the amendment to the FMP jeopardize the protection and conservation of oceanic resources.

(b) Goal No. 5 also addresses the issue of conservation of natural resources. The guidelines call for fish and wildlife areas and habitats to be protected and managed in accordance with the Oregon Fish and Wildlife Commission's (OFWC) management plans. The FMP was found consistent with the management objectives for groundfish stocks off Oregon that were developed by the Oregon Department of Fish and Wildlife and adopted by the Oregon Fish and Wildlife Commission. No action suggested by the FMP amendment would compromise this consistency.

(c) Goal No. 16 addresses the protection of estuarine resources. This goal emphasizes the need for protection, maintenance, development, and appropriate restoration of long-term environmental, economic and social values; diversity, and benefits of Oregon's estuaries. Comprehensive plans and activities affecting estuaries must protect the estuarine ecosystem including its biological productivity, habitat, diversity, unique features and water quality. However, Goal 16 underscores the need to classify Oregon estuaries and to specify "the most intensive level of development or alteration which may be allowed to occur within each estuary." Neither the FMP nor its amendment has a direct affect on development or alteration of the estuarine environment.

(d) Goal No. 8, Recreational Needs, refers to existing and future demand by citizens and visitors for recreational facilities and opportunities. Planning guidelines recommend that inventories of recreational opportunities be based on adequate research and analysis of the resource, and where multiple uses of the resource exist, provision be made for recreational users. The FMP amendment in no way impedes the opportunity for Oregon recreational fishermen to harvest groundfish.

(e) Goal No. 1, Citizen Involvement, calls for the coordination of state, regional, and federal planning with the affected governing bodies and citizenry. Guidelines address communication methods, provision of technical information, and feedback mechanisms to assure the opportunity for citizen involvement in planning pro-

cesses. The fishery management plan process provides for close collaboration and coordination between state and federal management entities and assures citizen involvement in decision-making through the forum of the Pacific Council and through a series of public hearings that are convened before the Council adopts any fishery management measures.

(f) Lastly, insofar as FMPs and FMP amendments have the potential to indirectly affect the coastal zone by stimulating private development of new markets or development of fish handling and processing facilities, or otherwise influence land-use planning, Goals 2, 9, and 17 may also apply.

California State Coastal Zone Management Plan and San Francisco Bay Plan

California State Coastal Zone Management Plan.

The California State Coastal Zone Management Plan is based upon the California Coastal Act of 1976, Division 20, California Public Resources Code, Sections 30000, et seq.; the California Urban and Coastal Park Bond Act of 1976, Division 5, CPRC 5096.777 et seq.; and the California Coastal Commission Regulations, California Administrative Code, Title 14.

The California Coastal Act establishes a structure for state approval of local coastal programs (Section 30050). The California Coastal Commission is the state's coastal zone agency (Section 30300). The coastal zone boundaries are generally the seaward limit of state jurisdiction, and inland to 1,000 yards from the mean high-tide line.

The general provisions of the California Plan that address issues significant to this analysis concern the protection of the ocean's resources, including marine fish and the natural environment. The plan also calls for the balanced utilization of coastal zone resources, taking into account the social and economic needs of the people of the state. Specific coastal zone policies developed to achieve these general goals and which are applicable or potentially applicable to the regulatory measures proposed in the amendment to the FMP have been identified as follows:

(a) Section 30210. "...recreational opportunites shall be provided for all the people consistent with the need to protect natural resource areas from overuse."

This goal is consistent with the FMP which seeks to provide recreational fishing opportunities consistent with the needs of other user groups and the need to protect the resource. Although some charter boat operators may object to the expansion of joint ventures for jack mackerel north of 39°N. latitude (Issue 7), such joint ventures are not expected to inhibit recreational opportunities for California citizens or to jeopardize any stock of fish.

(b) Section 30231. "The biological productivity and quality of coastal waters, streams, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained, and, where feasible, restored..."

Any action considered in the amendment does not affect the quality of coastal waters. However, it does provide for the conservation and optimum use of groundfish stocks, which are an integral part of the ecology of the coastal waters.

(c) Section 30230. "Uses of the marine environment shall be carried out in a manner...that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes."

The amendment to the FMP does not jeopardize the reproductive capability of any resource, has no significant environmental impacts, and promotes optimum utilization among user groups, with the intent of maintaining the groundfish harvest at levels which provide the long-term maximum sustainable yield.

(d) Section 30234. "Facilities serving the commercial fishing and recreational boating industries shall be protected, and where feasible, upgraded."

This amendment does not specifically address the development of shoreside facilities that serve the commercial and recreational fishing industries. However, several issues propose expansion of the domestic commercial groundfish harvest (within biologically safe limits), to the benefit of shoreside industry.

(e) Section 30260. "Coastal-dependent industrial facilities (such as fishing support) shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with the Act."

(f) Section 30708. "All port-related developments shall be located...so as to...give highest priority to the use of existing land space within harbors for port purposes including...necessary (commercial fishing) support and access facilities."

The amendment does not address the location of coastal-dependent industry or ports.

(g) Section 30411. "The California Department of Fish and Game and the Fish and Game Commission are the state agencies responsible for the establishment and control of wildlife and fishery management programs.."

The Director of the California Department of Fish and Game (CDFG) is a voting member of the Pacific Council. A representative from the CDFG participates on the Council's Groundfish Management Team and helped develop the FMP and its amendment. The Magnuson Act mandated that all interested individuals, including state fishery management

personnel, would have the opportunity to participate in the preparation of fishery management plans and amendments. This action is consistent with the provisions of Section 30411 because the CDFG has been involved in the planning process for those parts of the amendment that pertain to the management of California and coast-wide fisheries.

San Francisco Bay Plan.

The California State Coastal Zone Management Plan does not include San Francisco Bay. The San Francisco Bay Conservation and Development Commission has jurisdiction over the Bay itself, as well as any river, stream, tributary, creek, flood control or drainage channel that flows into the Bay.

The San Francisco Bay Plan was approved by the California legislature in 1969. Part II of the Plan describes the Commission's objectives as follows:

1. Protect the Bay as a great natural resource for the benefit of present and future generations.

2. Develop the Bay and its shoreline to their highest potential with a minimum of Bay filling.

Part III of the Bay Plan describes the findings and policies of the Commission including fish and wildlife policies for the Bay. The adopted policies state:

"1. The benefits of fish and wildlife in the Bay should be insured for present and future generations of Californians. Therefore, to the greatest extent feasible, the remaining marshes and mudflats around the Bay, the remaining water volume and surface area of the Bay, and adequate fresh water inflow into the Bay should be maintained.

"2. Specific habitats that are needed to prevent the extinction of any species, or to maintain or increase any species that would provide substantial public benefits, should be protected, whether in the Bay or on the shoreline behind dikes..."

Part IV of the Bay Plan presents the findings and policies concerning the development of the Bay and the adjacent shoreline. Emphasis is given to the consideration of construction projects on filled lands and the controls over filling and dredging in the Bay.

The amendment to the FMP does not address water flows, inshore habitat protection, or shoreline development.

Consistency Determination

Appendix B describes the issues considered in the first amendment to the FMP and evaluates the likely impacts of various options that could be taken. The Environmental Assessment (Appendix A) and the Regulatory Impact Review/ Regulatory Flexibility Analysis (Appendix B) compare the expected impacts of

the amendment from environmental, social, and economic perspectives and assesses the impacts on small business. Any option analyzed in this amendment has been determined to have no significant impact under the National Environmental Policy Act, Executive Order 12991, and the Regulatory Flexibility Act.

Based on the above discussions and supported by these determinations, the NMFS finds that any action likely to result from the first amendment to the FMP is consistent, to the maximum extent practicable, with the approved Washington, Oregon, and California, and San Francisco Bay coastal zone management plans.

APPENDIX D
OTHER APPLICABLE LAW

Endangered Species Act (ESA) of 1973

The purposes of the ESA are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered and threatened species, and to take such steps as may be appropriate to achieve the objectives of the treaties and conventions created for these purposes. Those species listed as endangered under the ESA and which could be encountered in the groundfish fishery are: gray whale (Eschrichtius robustus), blue whale (Balaenoptera musculus), humpback whale (Megaptera novaaeanglie), right whale (Balaena glacialis), fin whale (Balaenoptera physalus), sei whale (Balaenoptera borealis), sperm whale (Physeter macrocephalus), and leather back sea turtle (Dermochelys coriacea).

The Council and the NMFS have conducted a biological assessment as required under Section 7(c) of the ESA and have determined that the conservation and management measures that are proposed in the first amendment to the FMP are not likely to affect any listed threatened or endangered species under NMFS jurisdiction.

Marine Mammal Protection Act (MMPA) of 1972

The purpose of the MMPA is to protect marine mammals and to prevent certain marine mammal species and stocks from falling below their optimum sustainable population which is defined in Section 3(8) as "...the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element."

Recreational and commercial groundfish fishermen occasionally will have an incidental involvement with marine mammals. Any commercial fishermen that may expect to become involved with marine mammals incidental to normal fishing operations should apply to the NMFS for a free certificate of inclusion. The certificate of inclusion prevents the fishermen from being in violation of the MMPA in the event a marine mammal is taken incidental to normal fishing operations.

Taking marine mammals incidental to commercial fishing is only permitted by the MMPA for marine mammals which are not depleted as defined by Section 3(1). Fishing under the first amendment to the FMP will not deplete any marine mammal resource.

Paperwork Reduction Act of 1980.

The major purposes of the Paperwork Reduction Act of 1980 are: (1) to minimize the federal paperwork burden for individuals, small businesses, state and local governments; (2) to minimize the cost to the federal government of collecting, maintaining, using, and disseminating information; and (3) to ensure that the collection, maintenance, use and dissemination of information by the federal government is consistent with applicable laws relating to confidentiality. NMFS has determined that neither the FMP amendment nor the regulations that will implement the amendment will involve any federal government collection of information that would violate the purposes and requirements of the Paperwork Reduction Act. Some slight modification of current record-keeping requirements could be necessary to record the progress of new joint venture fisheries, but no new reporting requirements would be imposed.

50 CFR Parts 611 and 663

[Docket No. 40446-4072]

Pacific Coast Groundfish Fishery

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

ACTION: Final rule.

SUMMARY: This document announces final regulations implementing the first amendment to the Pacific Coast Groundfish Fishery Management Plan (FMP). Experience has demonstrated that seven requirements of the FMP should be modified to accommodate more flexible, fair, and reasonable management of the fishery. The amendment revises these requirements so that regulations are less burdensome to most fishermen, the groundfish resource will be conserved as necessary and fairly allocated, and the optimum yield will be achieved.

EFFECTIVE DATE: These regulations are effective 0001 Pacific Daylight Time, July 29, 1984.

ADDRESS: Copies of the amendment, combined with the environmental assessment and the regulatory impact review/final regulatory flexibility analysis, are available from the Pacific Fishery Management Council, 526 SW. Mill Street, Portland, OR 97201, 502-221-6352.

FOR FURTHER INFORMATION CONTACT: Dr. T.E. Kruse (Acting Director, Northwest Region, NMFS) 206-526-6150; or Mr. E.C. Fullerton (Director, Southwest Region, NMFS) 213-548-2575.

SUPPLEMENTARY INFORMATION: Regulations implementing the Pacific Coast Groundfish Fishery Management Plan (FMP) were published October 5, 1982 (47 FR 43964). Regulations proposed to implement Amendment 1 to the FMP were published April 16, 1984 (49 FR 14994) with a 45-day comment period. No comments were received.

The revisions to the regulations implementing the FMP include providing increased flexibility to achieve the 20-year rebuilding schedule for Pacific ocean perch; deleting a requirement (which had been deferred indefinitely) to mark intermediate miles of fixed gear groundlines; exempting recreational vessels and commercial passenger fishing vessels from vessel identification provisions; adding species to the groundfish management unit; slowing achievement of the OY for sablefish without providing a competitive advantage to either fixed or trawl gear; deleting a pelagic trawl footrope requirement; and establishing a separate, numerical optimum yield (OY) estimate for jack mackerel caught north of 39 °N. latitude. This final specification of OY is established in the following section. Several technical revisions announced in the proposed regulations dealing with the definition of "landing" at § 663.2 and with increases to OYs and ABCs at § 663.24 also are made final; the evolution of these revisions, including the history of public involvement, was discussed at length in the proposed regulations and amendment and is not repeated here. The regulation proposed at § 663.27(b)(3) allocating the last ten percent of the sablefish OY between fixed and trawl gears is revised to clarify that, as long as OY has not been reached, landings will be prohibited only for the gear type that has taken its five percent allocation of OY. However, landings will be prohibited for all gears when OY is reached, even if the five percent allocation has not been taken. Typographical errors in the proposed rule also have been corrected, notably the citation for the definition section which is at § 663.2 not "§ 663.4", and the incidental percentage allowance for rockfish excluding Pacific ocean perch which is 0.738 percent rather than "0.73 percent".

The Quinault, Hoh, Quileute, and Makah Indian tribes have informed the Council that they will adopt regulations governing tribal members who fish for groundfish off the Washington coast in 1984, and that these regulations will be consistent with the Federal regulations implementing the FMP.

Management Specifications and Retention Amounts

Amendment 1 establishes a numerical OY for jack mackerel (north of 39 °N. latitude). Accordingly, table 2 (published at 49 FR 1061 on January 9, 1984 and corrected at 49 FR 3190 on January 26, 1984) which announced 1984 specifications of OY and its components is revised to include jack mackerel. Footnote 1 also is modified to include the incidental allowances in a jack mackerel target fishery, and footnote 4 is revised to clarify the meaning of "other species." The amended table is reprinted in its entirety below.

TABLE 2.—FINAL SPECIFICATIONS OF OY AND ITS DISTRIBUTION FOR 1984

[In thousands of metric tons]

[Amended]

Species	Total OY	DAP	JVP [1]	DAH	Reserve	TALFF [1]
Pacific whiting	175.5	10.0	100.0	110.0	35.0	30.5
Sablefish	[2] 17.4	17.4	0.0	17.4	0.0	0.0
Pacific ocean perch	[3] 1.55	1.55	0.0	1.55	0.0	0.0
Shortbelly rockfish	10.0	3.4	0.0	3.4	0.0	6.6
Widow rockfish	9.3	9.3	0.0	9.3	0.0	0.0
Jack mackerel (north of 39° N. latitude)	12.0	2.0	10.0	12.0	0.0	0.0
Other species	[4]					

[1] In foreign trawl and joint venture fisheries for Pacific whiting, incidental catch allowance percentages (based on TALFF) and incidental retention percentages (based on JVP) are: Sablefish 0.173%, Pacific ocean perch 0.062%, rockfish excluding Pacific ocean perch 0.738%, flatfish 0.1%, jack mackerel 3.0%, and other species 0.5%. In foreign and joint venture fisheries for jack mackerel (north of 39° N. latitude), incidental allowance percentages are the same as in the Pacific whiting fisheries, except that the Pacific whiting allowance is 3.0% and, by definition, there is no incidental catch of jack mackerel. In foreign trawl and joint venture fisheries, "other species" means all species, including non-groundfish species, except Pacific whiting, sablefish, Pacific ocean perch, rockfish excluding Pacific ocean perch, flatfish, jack mackerel, and prohibited species. If a foreign trawl or joint venture fishery develops for species other than Pacific whiting or jack mackerel, incidental allowance percentages will be stated in the conditions and restrictions to the foreign fishing permit. See § 611.70(c)(2) for application of incidental retention allowance percentages to joint venture fisheries.

[2] Of this 17,400 metric tons, 2,500 metric tons is for part of the Monterey subarea. See § 663.21(a)(2).

[3] Of this 1,550 metric tons, 600 metric tons is for the Vancouver subarea and 950 metric tons is for the Columbia subarea. Pacific ocean perch from other subareas are included in the OY for "other species." See § 663.21(a)(3).

[4] The total OY for "other species" (listed at §§ 663.2 and 663.21 (a)(3)) is that amount of fish that may be lawfully harvested and/or processed under § 611.70 and Part 663.

Classification

The Regional Director determined that these regulations are necessary for the conservation and management of the Pacific coast groundfish fishery and that they are consistent with the Magnuson Fishery Conservation and Management Act and other applicable law. The notice

of availability of the amendment was published on March 20, 1984. More detailed summaries of the following classifications appear in the preamble to the proposed regulations at 49 FR 14994.

The Council prepared an environmental assessment for Amendment 1 to the FMP and concluded that there will be no significant impact on the environment as a result of this rule. The environmental assessment is available from the Council at the address given above.

The NOAA Administrator determined that these regulations are not a "major rule" requiring a regulatory impact analysis under Executive Order 12291. The Council prepared a regulatory impact review which appends the amendment and explains the reason for this determination.

The General Counsel of the Department of Commerce certified to the Small Business Administration that these regulations, if adopted, will not have a significant economic impact on a substantial number of small entities. The initial regulatory flexibility analysis which was prepared in conjunction with the regulatory impact review states that the total impact of these proposed regulations is expected to be beneficial but minor (see the summary at 49 FR 14994).

These regulations do not contain a collection of information requirement for purposes of the Paperwork Reduction Act.

The Council determined that these regulations do not directly affect the coastal zone of any state with an approved coastal zone management program.

List of Subjects

50 CFR Part 611

Fish, Fisheries, Foreign relations, Reporting requirements.

50 CFR Part 663

Administrative practice and procedure, Fish, Fisheries, Fishing.

Dated: June 29, 1984.

Carmen J. Blondin,

Deputy Assistant Administrator for Fisheries Resource Management, National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR Parts 611 and 663 are amended as follows:

PART 611—[AMENDED]

1. The authority citation for Part 611 reads as follows:

Authority: 16 U.S.C. 1801 *et seq.*, unless otherwise noted.

2. In § 611.70, a new paragraph (j)(5)(xiv) is added; paragraphs (j)(6), (7), and (8) are redesignated as (j)(7), (8), and (9), respectively; a new paragraph (j)(6) is added; newly redesignated paragraph (j)(7) is revised; and a new paragraph (j)(8)(iii) is added to newly redesignated paragraph (j)(8) to read as follows—

§ 611.70 Pacific coast groundfish fishery.

* * * * *

(j) * * *

(5) * * *

(xiv) For each haul in which Pacific whiting is not the directed species, the name of the directed species must be entered in the daily catch or daily receipt log following the trawl or receipt number.

(6) *Daily cumulative catch logs.* In addition to the requirements of § 611.9, information for each directed fishery must be maintained on a separate page of this log. If the directed (allocated) species is not Pacific whiting, the name of the directed species must be entered on the line below the permit number.

(7) *Daily cumulative receipt logs.* Operators of foreign vessels receiving U.S.-harvested fish must maintain a daily cumulative receipt log and must record on a daily basis the round weight of all species received during the permit period, whether retained or discarded. Information for each directed species and each fishing area must be maintained on a separate page of the log. (If the directed species is not Pacific whiting, the name of the directed species must be entered on the line below the permit number.) Data for a day (0001 GMT to 2400 GMT) must be recorded before the end of the next day. The following information must be recorded accurately in the daily cumulative receipt log:

* * * * *

(8) * * *

(iii) Any weekly catch report (CATREP) submitted under § 611.9(e) or weekly report of receipt of U.S.-harvested fish (RECREP) submitted under § 611.9(f) must state if it pertains to a directed species other than Pacific whiting by following the word "CATREP" or "RECREP" with the name of the directed species. If more than one directed fishery is conducted in the same week, a separate CATREP or RECREP must be submitted for each such species.

PART 663—[AMENDED]

3. The authority citation for Part 663 is as follows:

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

4. In § 663.2 the definitions of *"Groundfish"* and *"Land* or *landing"* are revised to read as follows:

§ 663.2 Definitions.

Groundfish means species managed by the Pacific Coast Groundfish Plan, specifically:

Common Name and Scientific Names

Sharks:
leopard shark, *Triakis semifasciata*
soupfin shark, *Galeorhinus zyopterus*
spiny dogfish, *Squalus acanthias*
Skates:
big skate, *Raja binoculata*
California skate, *R. inornata*
longnose skate, *R. rhina*
Ratfish: ratfish, *Hydrolagus colliei*
Morids: finescale codling, *Antimora microlepis*
Grenadiers: Pacific rattail, *Coryphaenoides acrolepis*
Roundfish:
cabezon, *Scorpaenichthys marmoratus*
*jack mackerel (north of 39° N. latitude), *Trachurus symmetricus*
kelp greenling, *Hexagrammos decagrammus*
lingcod, *Ophiodon elongatus*
Pacific cod, *Gadus macrocephalus*
*Pacific whiting, *Merluccius products*
*sablefish, *Anoplopoma fimbria*
Rockfish:
aurora rockfish, *Sebastes aurora*
bank rockfish, *S. rufus*
black rockfish, *S. melanops*
black and yellow rockfish, *S. chrysomelas*
blackgill rockfish, *S. melanostomus*
blue rockfish, *S. mystinus*
bocaccio, *S. paucispinis*
bronzespotted rockfish, *S. gilli*
brown rockfish, *S. auriculatus*
calico rockfish, *S. dalli*
California scorpionfish, *Scorpaena guttata*
canary rockfish, *Sebastes pinniger*
chilipepper, *S. goodei*
China rockfish, *S. nebulosus*
copper rockfish, *S. caurinus*
cowcod, *S. levis*
darkblotched rockfish, *S. crameri*
dusty rockfish, *S. ciliatus*
flag rockfish, *S. rubrivinctus*
gopher rockfish, *S. carnatus*
grass rockfish, *S. rastrelliger*
greenblotched rockfish, *S. rosenblatti*
greenspotted rockfish, *S. chlorostictus*
greenstriped rockfish, *S. elongatus*
harlequin rockfish, *S. variegatus*
honeycomb rockfish, *S. umbrosus*
kelp rockfish, *S atrovirens*
longspine thornyhead, *Sebastolobus altivelis*
Mexican rockfish *Sebastes macdonaldi*
olive rockfish, *S. serranoides*
*Pacific ocean perch, *S. alutus*
pink rockfish, *S. eos*
quillback rockfish, *S. maliger*
redbanded rockfish, *S. babcocki*
redstripe rockfish, *S. proriger*
rosethorn rockfish, *S. helvomaculatus*
rosy rockfish, *S. rosaceus*
rougheye rockfish, *S. aleutianus*
sharpchin rockfish, *S. zacentrus*
*shortbelly rockfish, *S. jordani*
shortraker rockfish, *S. borealis*

shortspine thornyhead, *Sebastolobus alascanus*
silvergray rockfish, *Sebastes brevispinis*
speckled rockfish, *S. ovalis*
splitnose rockfish, *S. diploproa*
squarespot rockfish, *S. hopkinsi*
starry rockfish, *S. constellatus*
stripetail rockfish, *S. saxicola*
tiger rockfish, *S. nigrocinctus*
treefish, *S. serriceps*
vermilion rockfish, *S. miniatus*
*widow rockfish, *S. entomelas*
yelloweye rockfish, *S. ruberrimus*
yellowmouth rockfish, *S. reedi*
yellowtail rockfish, *S. flavidus*

All genera and species of the family Scorpaenidae that occur off Washington, Oregon, and California are included, even if not listed above. The Scorpaenidae genera and *Sebastes, Scorpaena, Scorpaenodes,* and *Sebastolobus.*

Flatfish:
arrowtooth flounder [arrowtooth turbot], *Atheresthes stomias*
butter sole, *Isopsetta isolepis*
curlfin sole, *Pleuronichthys decurrens*
Dover sole, *Microstomus pacificus*
English sole, *Parophrys vetulus*
flathead sole, *Hippoglossoides elassodon*
Pacific sanddab, *Citharichthys sordidus*
petrale sole, *Eopsetta jordani*
rex sole, *Glyptocephalus zachirus*
rock sole, *Lepidopsetta bilineata*
sand sole, *Psettichthys melanostictus*
starry flounder, *Platichthys stellatus*

Note.—Only those species marked with an asterisk (*) have a numerical OY; the others are in the "other species" complex. See § 663.21.

* * * * *

Land or *landing* means to begin offloading any fish, to arrive in port with the intention of offloading any fish, or to cause any fish to be offloaded.

* * * * *

5. Section 663.6 is revised to read as follows:

§ 663.6 Vessel identification.

(a) *Display.* The operator of a vessel which is over 25 feet in length and is engaged in commercial fishing for groundfish must display the vessel's official number on the port and starboard sides of the deckhouse or hull, and on a weather deck so as to be visible from above. The number must contrast with the background and be in block arabic numerals at least 18 inches high for vessels over 65 feet long and at least 10 inches high for vessels between 25 and 65 feet in length. The length of a vessel for purposes of this section is the length set forth in U.S. Coast Guard records or in State records if no U.S. Coast Guard record exists.

(b) *Maintenance of numbers.* The operator of a vessel engaged in commercial fishing for groundfish shall keep the identifying markings required by paragraph (a) of this section clearly legible and in good repair, and must ensure that no part of the vessel, its rigging, or its fishing gear obstructs the view of the official number from an enforcement vessel or aircraft.

(c) *Commercial passenger vessels.* This section does not apply to vessels carrying fishing parties on a per-capita basis or by charter.

6. In § 663.21, paragraph (a)(1) is revised to read as follows:

§ 663.21 General limitations.

(a) *Optimum yield.* (1) Numerical optimum yields (OYs) for Pacific whiting, sablefish, Pacific ocean perch, shortbelly rockfish, widow rockfish, and jack mackerel (north of 39°00′ N. latitude) in the regulatory subareas are published in the Federal Register. OYs for those six species are the maximum amount which may be retained or landed shoreside each year in the fishery management area or relevant subarea and include fish caught in the territorial sea (0–3 nautical miles). The "other species" complex has no numerical OY and is regulated by the gear, area, and catch restrictions set forth in this Subpart B.

* * * * *

7. In § 663.22, paragraph (c) is added to read as follows:

§ 663.22 Inseason adjustments.

* * * * *

(c) *Modifications to catch restriction for Pacific ocean perch.* (1) Catch restrictions applicable to Pacific ocean perch are specified at § 663.27(b)(2). After receiving a recommendation and written report from the Pacific Fishery Management Council, the Secretary may publish one or more notices under § 663.23 to modify these catch restrictions if it is determined that such modification is necessary to achieve the OY based on the 20-year rebuilding schedule.

(2) A public hearing will be held before any determination is made that modification of catch restrictions applicable to Pacific ocean perch is necessary to achieve OY, and before the Secretary publishes any notice to implement such modification.

* * * * *

8. In § 663.24, paragraph (a) is revised to read as follows:

§ 663.24 Annual adjustments.

(a) Each year, the Secretary will publish a notice in the Federal Register specifying optimum yield (OY), domestic annual harvest (DAH), domestic annual processing (DAP), joint venture processing (JVP), and total allowable level of foreign fishing (TALFF) for Pacific whiting, sablefish, Pacific ocean perch, shortbelly rockfish, widow rockfish, and jack mackerel (north of 39°00′ N. latitude). The Secretary may publish season and area restrictions, incidental catch and receipt allowance restrictions, and any other restrictions, for any TALFF or JVP amount that may be specified for species other than Pacific whiting. The Secretary also will publish the annual ABCs for groundfish in the Federal Register. Annual specifications of numerical OYs and ABCs by the Secretary will not exceed by more than 30 percent the OYs and ABCs specified at the beginning of the previous fishing year.

* * * * *

9. In § 663.26, paragraphs (b)(6), (d)(4), and (f)(2) are revised to read as follows:

§ 663.26 Gear restrictions.

* * * * *

(b) * * *

(6) *Pelagic trawls.* Pelagic trawl nets must have unprotected footropes at the trawl mouth (without rollers or bobbins). Sweeplines, including the bottom leg of the bridle, must be bare.

* * * * *

(d) * * *

(4) Traps laid on a groundline must be marked at the surface at each terminal end with a pole and flag, light, radar reflector, and a buoy displaying clear identification of the owner.

* * * * *

(f) * * *

(2) Longlines must be marked at the surface at each terminal end with a pole and flag, light, radar reflector, and a buoy displaying clear identification of the owner.

* * * * *

10. In § 663.27, paragraphs (b)(2) and (b)(3) are revised to read as follows:

§ 663.27 Catch restrictions.

* * * * *

(b) * * *

(2) *Pacific ocean perch.* The trip limit for Pacific ocean perch is 5,000 pounds or 10 percent by weight of all fish on board, whichever is greater, per vessel per fishing trip, except as modified under § 663.22(c).

(3) *Sablefish.* When it is determined that 90 percent of the OY will be reached for that portion of the Monterey subarea between 37°00′ N. latitude and 36°30′ N. latitude, or for the fishery management area as a whole, the Secretary will publish a notice in accordance with § 663.23 applicable to the relevant area dividing the 10 percent balance of OY equally (5 percent apiece) between trawl gear and fixed gear, and

establishing a percentage trip limit for trawl gear. The trip limit will be based on the most recent data available for the season and will equal the average percentage of sablefish in all trawl landings containing sablefish in the area to which the trip limit applies (between 37°00' N. latitude and 36°30' N. latitude, or the fishery management area as a whole), but in no event will the trip limit exceed 30 percent by weight of all fish on board. If the Secretary determines that either trawl or fixed gear in the relevant area will take its 5 percent balance of OY, the Secretary will publish a notice of closure under § 663.23 prohibiting retention and landing of sablefish taken by that gear type in the relevant area. The provisions at § 663.21(b) prohibiting landings when OY is reached will apply even if fixed or trawl gear has not landed its 5 percent balance of OY.

[FR Doc. 84-17781 Filed 6-28-84; 4:37 pm]
BILLING CODE 3510-22-M