ENVIRONMENTAL ASSESSMENT (EA) FOR
AMENDMENT 12 TO THE PACIFIC GROUNDFISH FISHERY MANAGEMENT PLAN:
PROCESS FOR DEVELOPING STOCK REBUILDING PLANS, AND PLAN CONTENTS

Prepared by the staff of the
Pacific Fishery Management Council

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1.0 INTRODUCTION

This document describes a proposed amendment (the 12th) to the Pacific coast groundfish fishery management plan (FMP). This proposed amendment addresses plans for rebuilding overfished groundfish stocks. Rebuilding measures were included in FMP Amendment 11 the Pacific Fishery Management Council (Council) completed late in 1998. That amendment included a definition of "overfished" and, according to the definition, the Secretary of Commerce (through its fishery management agency, the National Marine Fisheries Service, NMFS) notified the Council that three stocks meet the definition.

Official rebuilding plans are a new invention, and NMFS and the various councils are debating what form these plans should take, how the councils should prepare them, and other factors. Some of the questions are: should rebuilding plans be FMP amendments, regulations, or take some different status? Are there ways to avoid the cumbersome and time-consuming FMP amendment process and regulatory process? If so, what document would NMFS review and approve? What are appropriate administrative procedures? How can NMFS and the public be certain these plans will be appropriate and adequate and, when completed and approved, that the council will act in accordance with the plans over time?

The Council is firmly committed to rebuilding overfished groundfish stocks and intends to establish an efficient process to ensure its rebuilding plans are comprehensive, timely, flexible and successful. To accomplish these objectives, the Council intends to amend the FMP to provide clearer guidance for development of rebuilding plans, better describe the administrative procedures, and clarify its intentions to develop management proposals to implement the plans until the stock has fully recovered. In addition to this FMP amendment, the Council has already prepared and submitted rebuilding plans for the three stocks and has begun development of two additional plans. Management measures to implement the first three plans were included in the annual specifications published in the Federal Register on January 4, 2000. Those plans and management measures are discussed briefly in this document as examples of the types of measures that may be necessary to rebuild overfished stocks.

1.1 Background

The groundfish fisheries in the Exclusive Economic Zone (EEZ) offshore of Washington, Oregon, and California are managed by the Pacific Coast Groundfish Fishery Management Plan (FMP). The FMP was prepared by the Pacific Fishery Management Council (Council) under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Actions taken to amend the FMP or implement other regulations governing the groundfish fisheries must meet the requirements of Federal laws and regulations. In addition to the Magnuson-Stevens Act, the most important of these are the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), Executive Order (EO) 12866, and the Regulatory Flexibility Act (RFA). NEPA, EO 12866 and the RFA require a description of the purpose and need for the proposed action as well as a description of alternative actions which may address the problem. However, in this case no regulations are proposed; this amendment to the FMP (Amendment 12) is intended to bring it into compliance with the Magnuson-Stevens Act by revising and clarifying the administrative procedures for preparing plans to rebuild overfished groundfish stocks.

The Magnuson-Stevens Act, as revised in 1996, contains a number of provisions pertaining to the content of FMPs and a requirement that all FMPs be updated so as to be consistent with those provisions by October 11, 1998. In early 1997, the Council reviewed the FMP and began the process to amend it as necessary to bring it back into compliance with new requirements. Among the provisions of that amendment were definitions of "overfishing" and "overfished." When NMFS approved those provisions, the agency notified the Council that three groundfish stocks are now determined to be overfished according to the amended FMP. The Magnuson-Stevens Act requires councils to prepare rebuilding plans within 12 months of such a notification. This document discusses options to address this mandate.

Section 303 of the Magnuson-Stevens Act, titled "Contents of Fishery Management Plans," lists the required provisions each FMP must contain or address. The specific provision addressed in this FMP amendment is

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(10) specify objective and measurable criteria for identifying when the fishery to which the plan applies is overfished (with an analysis of how the criteria were determined and the relationship of the criteria to the reproductive potential of stocks of fish in that fishery) and, in the case of a fishery which the Council or the Secretary has determined is approaching an overfished condition or is overfished, contain conservation and management measures to prevent overfishing or end overfishing and rebuild the fishery; (emphasis added)

The Secretary of Commerce has established advisory guidelines, based on the Magnuson-Stevens Act's "National Standards," to assist in this process of developing FMPs and FMP amendments. The final rule revising the national standard guidelines was published in the Federal Register on May 1, 1998.

1.2 Council Decision Process and Public Hearings

On March 3, 1999, the Council was notified that Amendment 11 to the groundfish FMP had been approved and that according to the FMP's revised definition of "overfished" stocks, three species met the criteria and must be rebuilt. With the help of NMFS and the authors of the recent assessments for these three species, the Council began developing the information necessary for developing rebuilding plans. At its June 1999 meeting, the Council reviewed preliminary scientific analyses of current stock condition, maximum sustainable yield (MSY) stock size, and the time period required to allow each of the three stocks to rebuild. The Council also held discussions with NMFS and the public about what a rebuilding plan would look like, since the Council had never prepared one under the new legal requirements. A range of opinions was discussed, from requiring an FMP amendment each time a rebuilding plan is prepared or revised, to informal procedures that avoid "red tape." However, opinions appear to be nearly unanimous that (1) rebuilding plans are necessary and appropriate, (2) the public should be involved in their development, (3) the best science should provide the basis for determining the necessary harvest reductions, (4) that rebuilding plans should not disrupt traditional fishing more than necessary, and (5) that the needs for fishing sectors and fishing communities should be considered and, if necessary, conservation burdens and benefits should be shared equitably.
2.0 DEVELOPMENT OF REBUILDING PLANS FOR OVERFISHED GROUNDFISH STOCKS

2.1 Purpose and Need for Action

The Magnuson-Stevens Act and National Standard Guidelines state that within one year of notification that a stock is overfished, the Council must prepare and submit a rebuilding plan for the stock. Amendment 11 echoed most of the provisions of the Magnuson-Stevens Act and guidelines but did not clearly specify the administrative procedures to develop and approve these plans, nor did it establish clear goals and objectives or describe the contents of rebuilding plans. The Council has already prepared and submitted rebuilding plans for three stocks (bocaccio in California, Pacific ocean perch primarily in Oregon and Washington, and lingcod along the entire coast) that meet the criteria of “overfished.” The Council is also preparing plans for two additional species (cowcod and canary rockfish) which will be completed and submitted around December 2000.

2.2 Alternatives Including Proposed Action

Alternative 1 (Status quo or no action). Do not amend the FMP. The Council will prepare rebuilding plans as stated in the FMP, during the annual management process. OY recommendations will be consistent with the Council’s rebuilding plans. Allocations and other non-routine measures will be implemented through the appropriate rule-making process. No regulations are proposed at this time.

Alternative 2 (Framework amendment). The Council will prepare a plan amendment that clarifies the process for preparing and approving rebuilding plans. Rebuilding goals and objectives will be included in the FMP; the open access allocation for each overfished stock may be suspended for the duration of the plan but may be reinstated without FMP or regulatory amendment. Individual rebuilding plans are expected to be submitted to NMFS along with the Council’s annual management recommendations. NMFS may approve, disapprove, or partially approve a rebuilding plan; whatever the decision, the Council will be informed in writing, including any reasons for not concurring with the Council’s recommendations. Rebuilding plans may be revised through the same process, and will remain in effect for the duration of the rebuilding period or until revised. The Council will make available its proposed rebuilding plans and those approved by NMFS in the SAFE document or by similar means. Any non-routine management measures will be implemented through the appropriate rule-making process. No regulations are proposed at this time.

2.3 Synopsis of Alternatives

Alternative 1 is simpler and less formal for both the Council and NMFS. The FMP currently says whenever the Council is notified or believes a stock is overfished, it will develop a rebuilding plan as part of annual management process. Under this option, a rebuilding plan is neither part of the FMP nor a regulation. Rather, it may be a Council policy statement or other classification. The FMP also says “The recommended numerical OY values will include any necessary actions to rebuild any stock determined to be below its overfished/rebuilding threshold and may include adjustments to address uncertainty in the status of the stock.” Thus, NMFS will have to approve or disapprove the Council’s overall harvest recommendations for each overfished stock on an annual basis. If NMFS believes the recommended OY is inconsistent with the rebuilding plan, including the plan’s goals, objectives and schedules, the RA could disapprove the recommended OY. This approach may not provide the certainty and continuity NMFS is seeking.

Alternative 2 would be similar to Alternative 1 but would establish clearer procedures for developing rebuilding plans and would establish general rebuilding goals and objectives. It would authorize suspension of the open access allocation share, but would require regulatory amendment to establish a different percentage. Alternative 2 would clarify the procedure for NMFS to review and approve each rebuilding plan or plan revision and specify that each plan will remain in effect from year to year. It would describe the contents of rebuilding plans, procedures for preparing them, and provide a clearer statement that OYs and other Council management recommendations will be consistent with the rebuilding plan.
2.4 Background

There are strong opinions and disagreements about rebuilding plans for west coast groundfish stocks, due in large part to the absence of adequate information about how many fish are in the ocean, how much the populations have changed over the years, and what has caused abundances to decline. Stock assessments for west coast groundfish are typically based on several sources of information that often conflict. The primary data source is usually the series of surveys conducted by NMFS to determine population trends over the years. Unfortunately, these surveys have been conducted infrequently and do not measure abundance of some species (especially rockfish) as well as we would like. Some people tend to believe the survey information more than other sources of information that may not be "scientifically validated." Other people, especially fishers who may frequently encounter these species and may have many years of their own personal experience and observations, may tend to disbelieve survey information that conflicts with their observations. When a new stock assessment indicates a stock is overfished, the absence of undisputed information becomes a much more serious problem.

While there may be general agreement about the condition of a stock, which is the case with bocaccio and POP, it is extremely difficult to decide how best to protect the overfished stock. The magnitude of catch reductions necessary is likely to severely disrupt individual fishers, communities, and even entire fishing sectors. As a stock declines, it is less likely to be encountered by individual fishers. However, it may be impossible to avoid bycatch of an overfished stock in the course of fishing for non-overfished ones. In order to achieve the rebuilding schedule, it may be necessary to curtail fishing for healthier stocks in some areas or to restrict some gears more than others.

2.5 Environmental Consequences

A stock that has declined in abundance to the degree it triggers the overfished definition is in trouble and needs protection from fishing pressure. At the same time, an industry that depends on such a stock may also be suffering due to the harvest opportunity that has already been lost. Therefore, rebuilding plans must deal with both biological and socioeconomic issues. The biological components of a rebuilding plan include estimation of the time it would take the stock to fully recover in the absence of all fishing, that is a complete cessation of mortality from fishing gear and activities. This evaluation may be based mainly on theory, because many aspects of most species’ life histories are poorly understood and unpredictable. For example, environmental conditions such as water temperature may improve or impede reproductive success. Abundance of predators or competitors will affect recovery rate. The species’ inherent productivity and longevity are only estimated, and estimates are likely overly optimistic or overly pessimistic. The current condition and MSY stock size are typically only rough estimates. The stock’s response to harvest protection will depend on environmental factors beyond human control. Frequent adjustments may be necessary in response to the measured progress, and the Council intends to review the progress every two years.

Groundfish species are not distributed evenly along the coast; there are “hot spots” and areas that have few of any given species. Therefore, the burdens of rebuilding will affect different geographic areas differently. Likewise, fishers using different fishing strategies will be affected differently.

2.5.1 Socioeconomic Impacts

Neither the status quo nor the preferred alternative has direct regulatory impacts; each merely describes the process the Council will adhere to in developing rebuilding plans for overfished stocks. However, any rebuilding plan will require fishing restrictions to reduce harvests. Stock protection measures will impose impacts on the industry and may result in severe economic hardship. If the geographic distribution of the overfished stock and the extent of its decline are small, it may be possible to soften the extent and intensity of economic impacts. In cases of severe stock depletion, widespread harvest restrictions may be necessary, not just for the overfished stock but also for other species that inhabit similar habitats. The Council intends to allocate the conservation burdens in an equitable manner, which will often require allocation of fishing privileges among various fishing sectors, geographic regions or time periods. To the extent possible, the impacts and tradeoffs will be evaluated before regulatory actions are taken. However, in many cases the
extent of social and economic impacts will unfold over time and may be only crudely estimated in advance.

Although neither of the alternatives is regulatory in nature, the following discussion is provided to provide an example of how rebuilding plans under either alternative may affect the human environment in the future.

2.5.1.1 Example: Year 2000 management measures to begin the rebuilding process for lingcod, bocaccio and canary rockfish

Although canary rockfish was not declared overfished until January 2000, in November 1999 the Council adopted management measures to ensure its protection from further overfishing. The management strategy adopted by the Council separates the major rockfish stocks from the *Sebastes* complex and divides the remaining species into assemblages. The intent is to bring harvest levels more closely in line with the ABCs for individual species and the various rockfish groups. In previous years, the single OY for the *Sebastes* complex inadvertently created an opportunity to overharvest some (generally higher-valued or more easily caught) species in the complex rather than spreading harvest over the entire complex. In effect, the ABCs for some species were subsidizing other species. By grouping the species differently and establishing management measures for each group, the Council intends to maintain fishing opportunities for abundant stocks while improving protection for depleted ones. Most of the stocks known to be overfished or depleted are shelf species, and the new strategy provides a way to reduce harvest of shelf species while allowing continued fishing for other species. In Washington and Oregon, recreational fishers primarily target nearshore stocks, with a lower level of fishing for shelf species and virtually no fishing for slope species. Therefore, most of the anticipated recreational harvest is deducted from the nearshore rockfish component, with the remainder deducted from the shelf component. In California, recreational catch spreads from the nearshore component into the shelf component. Deducting recreational harvest from the minor nearshore and shelf rockfish categories leaves less for the commercial sectors, especially with respect to nearshore rockfish. The strategy is expected to spread fishing effort more appropriately over the various stocks, but it will likely impact open access and limited entry nontrawl fishers more than some other groups since they have been the primary commercial harvesters of nearshore stocks. Although a greater portion of the shelf rockfish category is provided to the commercial sectors, the occurrence of depleted and overfished stocks in continental shelf areas results in limited fishing for those species and co-occurring species.

The FMP specifies that commercial (limited entry and open access) allocations are determined after the anticipated recreational harvest levels have been deducted from the total optimum yield. The Council may make specific allocations between the recreational and commercial sectors and within sectors as well. For the year 2000, the Council did not specify allocation shares, but rather took a more general approach. To achieve the necessary harvest reductions, the Council approved measures to reduce the overall recreational harvest of bocaccio and lingcod, determined the amount of reduction expected from the measures, and then allocated the remainder among limited entry and open access sectors. The reductions were not necessarily proportional between the sectors, but the Council believes they were fair and equitable.

**Recreational fisheries examples** Each of the three coastal states proposed measures to reduce recreational catch in its waters, and the Council generally endorsed those proposals. This resulted in different restrictions from state to state. However, similar catch reductions are intended and expected in each state. The states and the Council considered the tradeoffs between shortened seasons, reduced bag limits, size limits, and area restrictions.

**Washington recreational fishery example** The following is a summary of the recreational measures the Council adopted for next year.

- For lingcod, the open season is April 1 through October 31 with a bag limit of 1 fish, minimum size limit of 24 inches.
- Fishing for rockfish is allowed all year, with a 10-fish bag limit of which no more than 2 fish may be canary rockfish and no more than 2 fish may be yelloweye rockfish.

The recreational fishery for lingcod is closed 5 months in order to achieve the necessary catch reduction. The closure generally corresponds with the nest-guarding period when lingcod eggs and male lingcod are
particularly vulnerable. The magnitude of catch reduction that will result from the canary rockfish sub-limit is not clear. Previous recreational bag limits allowed fishers to take 10 canary rockfish, but fishers rarely caught that many. The main benefit of the sub-limit may be to discourage fishers from targeting canary rockfish.

**Oregon recreational fishery example**

- Fishing for lingcod and rockfish will be allowed all year.
- The rockfish bag limit will be reduced to 10 of which no more than 3 may be canary rockfish.
- For lingcod, the bag limit will be 1 fish with a minimum size limit of 24 inches and maximum size of 34 inches.

Oregon was able to maintain a year-round recreational season by imposing a "slot limit" for lingcod, that is, a minimum and maximum size. The necessary catch reduction results from the 34 inches maximum size.

**California recreational fishery example**

- The rockfish and lingcod season will be closed south of 36° N latitude (near Point Lopep) during January and February; between 36° N latitude and 40°10' N latitude (near Cape Mendocino), the rockfish and lingcod season will be closed during March and April.
- For lingcod, the bag limit will be 2 per day with a minimum size of 26 inches.
- For rockfish, the bag limit will be 10 per day of which no more than 3 each may be bocaccio or canary rockfish and not more than 1 cowcod per angler, but not over 2 cowcod per boat.
- Not more than 3 hooks per angler may be used while fishing for rockfish or lingcod, and the entire skin must remain on rockfish fillets that are filleted at sea; no filleting of cabezon at sea will be allowed.

The following minimum size limits will be in effect for recreational fishing in California: bocaccio - 10 inches; cabezon - 14 inches; greenling - 12 inches; and sculpins (family Scorpaenidae) - 10 inches. These size limits are the same as those for the commercial fishery.

**Limited entry trawl fishery example** In order to reduce harvest of shelf rockfish species, the Council endorsed an idea proposed by limited entry commercial fishing industry representatives to restrict the use of bottom trawls with large rollers on the footrope. The footrope of a bottom trawl is the line along the bottom front edge of the net that contacts the ocean floor. In recent years, innovative limited entry trawl fishers learned that, by stringing large rollers on their footropes, they could pull their nets over rocky terrain without snagging. Without the protection of such rollers, trawls cannot be fished as effectively in the rocky areas where canary rockfish and lingcod live. The Council chose to prohibit vessels that use large footropes, defined as more than 8 inches maximum diameter, from landing nearshore and shelf rockfish and most flatfish species. The Council also recommended that chafing gear to protect the bottom of trawl nets be prohibited. (Chafing gear is material that protects the trawl from abrasion and tearing on rough areas of the ocean floor.) Although limited entry trawl vessels are not prohibited from using large footropes in nearshore and continental shelf areas, they are not allowed to retain and sell most of the fish they might catch there. The Council believes this will provide enough disincentive to prevent inappropriate trawl activity in these areas and effectively reduce both catch and bycatch of shelf rockfish species. Any trawls, including those with footropes larger than 8 inches diameter, may be used to harvest a limited number of species that inhabit the deeper areas of the shelf and continental slope, primarily Dover and rex soles, thornyheads, sablefish, and deep-water rockfish. During some periods, large-diameter footrope trawls may also be used for arrowtooth flounder and petrale sole.

Another part of the strategy to allow commercial limited entry harvest of relatively abundant stocks without impacting depleted ones involves the use of midwater or pelagic trawls. Midwater trawls are pulled through the water column, usually without touching the bottom. These nets are very effective for catching species that live above the ocean floor, such as Pacific whiting and widow rockfish. Current restrictions ensure these nets may not be fortified for fishing on the bottom. Bottom trawl nets can also catch widow rockfish, but typically canary and yellowtail rockfish are caught at the same time. The Council believes the only way the
widow rockfish OY can be caught without impacting canary rockfish is with midwater trawl gear. Midwater gear may also be the best way to harvest yellowtail rockfish without harming canary rockfish.

Fishers will need to alter their fishing strategies as well as change gear. In order to comply with these regulations and continue fishing for other species on the continental shelf, many trawl fishers will modify their trawl nets. This means either replacing all rollers on the footrope that are larger than 8 inches in diameter or totally replacing the footrope. Those limited entry trawl vessels that did not have midwater trawl gear would choose to obtain it or forego the larger trip limits for widow, chilepepper and yellowtail rockfish. In many cases, purchase of midwater gear would not be practical. Not all vessels have sufficient horsepower and electronic gear to fish midwater nets effectively. In some cases, the vessel may not be near enough to adequate densities of midwater species to make gear purchases cost effective. Others may not have capital available to purchase this expensive gear.

Vessels that target primarily continental slope species (e.g., the Dover sole, thornyheads and trawl-caught sablefish complex) and already have midwater trawl gear would tend to be less affected than vessels that have traditionally targeted nearshore and/or shelf rockfish species. Also, vessels with permits to fish non-groundfish species such as pink shrimp and Dungeness crab would be less affected.

The management strategy for 2000 will require trawl fishers to make a conscious effort to avoid species of concern. A number of small trip limits have been established to provide for unavoidable bycatch, but these would not provide enough revenue for profitable fishing. If fishers treat these bycatch allowances as targets, discard mortality would increase and thwart the conservation efforts.

Limited Entry Fixed-gear (Non-trawl) Fisheries example

Most limited entry fixed-gear vessels primarily target sablefish with some incidental catch of other species. These fisheries seldom take any of the overfished species, and have the same trip limits as the limited entry trawl sector, with the exception of sablefish.

Open access fisheries example

The commercial open access fishery operates primarily in nearshore and shelf areas and includes vessels that use a wide variety of mobile and stationary gears. Among the gear types used are various vertical hook-and-line gears, trolled hook-and-line gear, fixed longline gear, pot gear, and non-groundfish trawl gears. Lingcod and many species of rockfish are extremely susceptible to hook-and-line gear. In some cases, hook-and-line gears can be used to selectively harvest a single species or group of closely associated species. However, such selective harvest requires specific gear and expertise. Due to the small open access allocations in 2000, open access trip limits are much smaller than in previous years.

2.5.2 Socioeconomic Summary

Rebuilding overfished stocks will require sacrifices by all harvesters during the rebuilding period. It is likely that measures will be necessary to allocate the conservation burdens among the various sectors that participate in harvesting the overfished stock and, possibly, to ensure the benefits of rebuilding are shared equitably.

The alternatives under consideration, including the status quo, have no regulatory effect and are only administrative and procedure in nature. The Council does not expect any economic impacts from any of the FMP amendment alternatives themselves; it is the regulations and other management measures that will cause economic impacts. However, there may be more or less confusion about the goals and procedures under the various alternatives, and the administrative costs of preparing rebuilding plans will differ. Likewise, there is no direct impact on groundfish populations, the ecosystem or the marine environment. The Council would likely develop similar or identical rebuilding plans and harvest limits under all the alternatives, including the status quo.
2.5.3 Physical and Biological Impacts

The environmental impacts generally associated with fishery management actions are effects resulting from (1) harvest of fish stocks which may result in changes in food availability to predators and scavengers, changes in the population structure of target fish stocks, and changes in the marine ecosystem community structure; (2) changes in the physical and biological structure of the marine environment as a result of fishing practices, e.g., effects of gear use and fish processing discards; and (3) entanglement/entrapment of non-target organisms in active or inactive fishing gear.

Amendment 11 established an OY "control rule" (Figure 1) that includes a default interim rebuilding plan for stocks with biomass smaller than the established overfished/rebuilding threshold (the proxy is 25% of the estimated unfished stock size or reproductive potential). This default interim rebuilding adjustment is intended to be in effect until a formal rebuilding plan is developed. One consideration is that formal rebuilding plans will attempt to phase into the default OY rule when the stock exceeds the rebuilding threshold, maintaining the intention to rebuild within the approved schedule.

Alternative 1. Under the status quo alternative, the Council would develop rebuilding plans in accordance with the Magnuson-Stevens Act. The intended effect would be to immediately prevent further depletion of the overfished stock and reduce human fishing impacts to the extent the stock may recover as quickly as possible (within 10 years, if possible, in accordance with the National Standard Guidelines). The length of each rebuilding program will depend on the inherent productivity of the species, environmental conditions (including availability of prey and habitat, abundance of predators, water temperature, etc.), and fishing. Of these, fishing often has the smallest impact but is the only factor the Council and NMFS can control. Reduced fishing will reduce any effects of fishing gear on the physical structure of the ocean floor, such as overturned rocks and boulders, crushed and dislodged benthic creatures such as corals and anemones, and suspension and redispersion of sediments.

Alternative 2. Under the preferred alternative, the same impacts on the physical and biological environment are anticipated (both type and quantity).

2.5.4 Administrative, Research and Funding Impacts

The research and management agencies will need to develop better information on the condition of the overfished stock and to monitor changes in stock condition over time. Every two years there must be a review and evaluation of the program to ensure the rebuilding time period and other objectives are achieved. The requirement to evaluate stock condition every two years will severely strain the stock assessment resources available to the west coast management process. Typically, stocks are assessed in a three year rotation pattern, and the assessment program is strained to the max already. Currently, three species have been classified as overfished, and two more are expected in the 1999 assessments. It is very possible the assessment resources could become consumed by reassessing overfished stocks every year with no time to evaluate the condition of other stocks, some of which may be overfished also. The data collection programs must be substantially improved and expanded to provide the data necessary to monitor progress without bogging down the entire management process.
2.6 Summary

The primary social effect of Alternative 2 in the short term might be intangible benefits from a clearer, more consistent policy for setting harvest levels.

3.0 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

This assessment has been prepared according to 40 CFR 1501.3, 1508.27, and 1508.9 and National Oceanic and Atmospheric Administration (NOAA) Administrative Order 216-6 in order to determine whether an Environmental Impact Statement is required for any major action that will have a significant impact on the quality of the human environment. An EIS is not required if the EA concludes that there is no significant impact.

The need for action, alternatives, and impacts are covered in Section 2 of this document. No immediate regulatory change is anticipated under either alternative.

The implementation of proposed changes to the groundfish FMP would not be a major action having significant impact on the quality of the marine or human environment of the West Coast. Mitigating measures related to such changes would be unnecessary. No unavoidable, adverse impacts on protected species, wetlands, or the marine environment would be expected to result from the recommended action.

Section 1508.27 of the CEQ Regulations lists ten specific points to be considered in determining whether or not impacts are significant. These ten points cover the five criteria for non-significance listed in Section 6.11 of NOAA Administrative Order 216-6.

Beneficial and Adverse Impacts

Over the short term there will be some adverse economic impacts resulting from the reductions in harvest levels, however, over the long terms benefits are expected to be greater than would have occurred if higher harvest levels had been maintained.

Neither of the alternatives would jeopardize the productive capability of the target resource species or any related stocks. In general, the Council's actions are directed at preventing overfishing and maintaining optimum yield. The Council relies on the best scientific information available, which typically comes from stock assessment documents prepared each year by various authors and the advice of its GMT and SSC. Short-term harvest reductions may result in some shift of effort onto other species. Vessels may seek to make-up any short-term reduction in revenue with effort increases in other fisheries. These effort shifts are expected to be monitored and controlled either as part of the management program for groundfish or other state and federal management programs for the species to which effort is redirected.

Public Health or Safety

The proposed actions are not expected to adversely impact public health or safety.

Unique Characteristics

The proposed actions are not expected to have any significant adverse impact on unique characteristics of the area such as historic or cultural resources, park lands, wetlands, or ecologically critical areas.

Controversial Effects

The proposed actions are not expected to involve significant controversial issues for the broader public. The reductions in biomass indicated by recent stock assessments are being challenged by some fishery participants; harvest reductions that are likely to result from rebuilding plans are likely to exacerbate this situation. On the other hand, a different sector of the public has supported more conservative management...
to ensure that overfished stocks are rebuilt as quickly as possible, that no overfishing be allowed, and that rebuilding plans place the needs of the fish as the highest priority.

**Uncertainty or Unique/Unknown Risks**

The proposed actions would not be expected to have any significant effects on the human environment that are highly uncertain or involve unique or unknown risks.

**Precedent/Principle Setting**

The proposed actions are not expected to have any significant effects in establishing a precedent and do not include actions which would represent a decision in principle about a future consideration.

**Relationship/Cumulative Impact**

The proposed actions are not expected to have any significant cumulative impacts that could have a substantial adverse effect on the fishery resources or any related resource.

**Historical/Cultural Impacts**

The proposed actions are not expected to have any significant effects on historical sites listed in the National Register of Historic Places and will not result in any significant impacts on significant scientific, cultural, or historic resources.

**Interaction with Existing Laws for Habitat Protection**

The proposed actions are not expected to have any significant interaction which might threaten a violation of Federal, state, or local law or requirements imposed for the protection of the environment. The proposed action has no direct effect on ocean or coastal habitat.

3.1 Other Applicable Law

3.1.1 Endangered Species Act (ESA)

NMFS issued Biological Opinions under the ESA on August 10, 1990, November 26, 1991, August 28, 1992, September 27, 1993, and May 14, 1996 pertaining to the impacts of the groundfish fishery on Snake River spring/summer chinook, Snake River fall chinook, and Sacramento River winter chinook. The opinions concluded that implementation of the FMP for the Pacific Coast Groundfish Fishery is not expected to jeopardize the continued existence of any endangered or threatened species under the jurisdiction of NMFS, or result in the destruction or adverse modification of critical habitat. Each alternative is within the scope of these consultations. Because the impacts of this action fall within the scope of the impacts considered in these Biological Opinions, NMFS has determined that additional consultations are not required for this action. In addition, coho salmon south of Cape Blanco, Oregon, have been listed as threatened (northern California/southern Oregon) and endangered (central California) under the ESA; steelhead have been listed as threatened (Snake River Basin/central California/south-central California) and endangered (upper Columbia River/southern California) under the ESA. Neither alternative, including the status quo, will affect coho salmon or steelhead.

3.1.2 National Environmental Policy Act (NEPA)

NMFS initially has determined that implementation of either alternative for this issue would not significantly affect the quality of the human environment, and therefore preparation of an environmental impact statement is not required by Section 102(C) of NEPA or its implementing regulations.
3.1.3 Executive Order 12866 (EO 12866)

No rule has been proposed under the preferred alternative, and therefore EO 12866 is not relevant.

3.1.4 Regulatory Flexibility Act (RFA)

No rule is proposed in conjunction with this action. However, rebuilding plans under either alternative would require federal implementing regulations, which will be evaluated at that time. The following discussion is not immediately relevant to the proposed action, but provided for an overview of impacts that may occur from future related actions.

An RIR also is designed to determine whether a proposed rule has a "significant economic impact on a substantial number of small entities" under the RFA. The purpose of the RFA is to relieve small businesses, small organizations, and small governmental entities from burdensome regulations and record keeping requirements. If the proposed action meets both the "significant" and "substantial" criteria, preparation of an Initial Regulatory Flexibility Analysis (IRFA) is required.

No immediate regulatory change is anticipated from the proposed amendment to the groundfish FMP. The category of small businesses potentially affected by future regulations to rebuild overfished stocks is virtually the entire groundfish fishery, including the catcher/processor fleet of ten vessels that operates only in the offshore whiting fishery. An example of the types of impacts that may be expected when rebuilding plans are developed and implemented was discussed above in section 2.5.1, particularly 2.5.1.1. An IRFA is conducted to make a preliminary determination as to whether a proposed action would have a "significant economic impact on a substantial number of small entities." In addition, an IRFA provides an estimate of the number of small businesses affected, a description of the small businesses affected, and a discussion of the nature and size of the impacts.

Section 8 describes the vessels that participate in the groundfish fishery. For the purposes of the RFA, all fishing vessels that operate in the Pacific groundfish fishery would be considered "small entities," with the exception of the 10 catcher/processors in the Pacific whiting fishery. Shore-based groundfish processors also may be considered "small entities." Motherships operating in the whiting fishery are not small businesses; they are floating processing facilities that do not harvest groundfish. (The Small Business Administration defines a small business in the commercial fishing activity as a firm with receipts of up to $2 million annually (thus eliminating at-sea processing vessels) and a processor with fewer than 500 employees. The average at-sea processor during 1991 earned $33 million in revenues from pollock, whiting, cod and other species and so does not meet the definition of a "small entity.") Therefore, all but 10 vessels operating in the groundfish fishery off Washington, Oregon, and California would be considered small businesses, and these 2,260 vessels (478 limited entry + 1,792 open access - 10 catcher/processors) would be considered the universe for purposes of an analysis under the RFA.

The proposed FMP amendment is required under the mandate of the Magnuson-Stevens Act, and regulations to implement rebuilding plans could affect a maximum of 2,270 vessels. Of these, approximately 2,260 (almost 100%) are considered small entities.

**Substantial number of small entities.** Under the FMP's license limitation (limited entry) program, approximately 468 vessels landed groundfish shoreside in 1996, and approximately 1,792 vessels operated in the open access fishery, for a total of 2,260 small businesses. An undetermined number also participate in recreational fisheries. In general NMFS has indicated that a "substantial number" of small entities to be more than 20% of those small entities engaged in the fishery. In this case, all vessels participating in the groundfish fishery potentially could be affected by rebuilding plans, depending on the species identified as overfished and harvest reductions necessary to rebuild them to maximum sustainable levels.

**Significant economic impacts.** Economic impacts on small business entities are considered to be "significant" if the proposed action would result in any of the following: (a) reduction in annual gross revenues by more than 5%; (b) increase in total costs of production by more than 5% as a result of an increase in compliance costs; (c) compliance costs as a percent of sales for small entities are at least 10%
higher than compliance costs as a percent of sales for large entities; (d) capital cost of compliance represent a significant portion of capital available to small entities, considering internal cash flow and external financing capabilities; or, (e) as a rule of thumb, 2% of small business entities being forced to cease business operations. There is no rule proposed in conjunction with this action, and therefore this is not a directly relevant issue. However, rebuilding plans are required under the Magnuson-Stevens Act. Regulations implementing such plans, whether developed under the status quo or preferred alternative, are likely to be significant as defined in (a) and (e). It is likely many small businesses will see reduction in annual gross revenues by more than 5%, and it is likely that more than 2% of small business entities will be forced to cease business operations. The Council is supportive of ongoing efforts by various state and federal agencies to mitigate the social and economic impacts of regulations necessary to rebuild overfished stocks.

Section 2.5 presents the potential impacts which would be used in making determinations under the RFA. Many small businesses could experience greatly reduced income because the amount available for harvest will be reduced in order to hasten stock recovery. Vessels that routinely depend on overfished species, or that take overfished species incidentally to normal fishing operations, are expected to be affected most severely.

3.1.5 Paperwork Reduction Act (PRA)

The proposed FMP amendment contains no collection-of-information requirement subject to the PRA.

3.1.6 Coastal Zone Management Act (CZMA)

Either of the alternatives considered would be implemented in a manner that is consistent to the maximum extent practicable with applicable State coastal zone management programs. NMFS will corresponded with the responsible State agencies under Section 307 of the CZMA to obtain their concurrence in this finding.

3.1.7 Executive Order 12612 (EO 12612)

This action does not contain policies with federalism implications sufficient to warrant preparation of a federalism assessment under EO 12612.

3.2 Coordination and Consultation

Measures to reduce recreational and commercial fishing in order to initiate the rebuilding programs were discussed and endorsed by the Council at its November 1999 meeting in Sacramento, California.

**Finding of no Significant Impact**

For the reasons discussed in this document, neither implementation of the proposed action nor the status quo would significantly affect the quality of the human environment, and the preparation of an environmental impact statement on the final action is not required by Section 102 (2)(C) of NEPA or its implementing regulations.
4.0 LIST OF PREPARERS

This document was prepared by the Council staff with contributions from NMFS scientists and managers, in consultation with NOAA General Counsel, Northwest Region:

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