ENVIRONMENTAL ASSESSMENT AND REGULATORY IMPACT REVIEW

AMENDMENT 13

PACIFIC COAST GROUNDFISH FISHERY MANAGEMENT PLAN

Environmental Assessment and Regulatory Impact Review for Compliance with Magnuson-Stevens Act Bycatch Requirements, for Amending the FMP to Increase Flexibility in Setting Annual Management Measures to Better Implement Overfished Species Rebuilding Plans, and to Remove Designated Species "B" Permits and Others.

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Environmental Assessment and Regulatory Impact Review for Amendment 13 to the Pacific Coast Groundfish Fishery Management Plan.

1.0 INTRODUCTION -- PURPOSE AND NEED FOR ACTION

On October 11, 1996, the Sustainable Fisheries Act went into effect, significantly amending the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Following the passage of the Sustainable Fisheries Act, fishery management councils were required to amend their fishery management plans to comply with the 1996 changes to the Magnuson-Stevens Act. Amendments to FMPs addressed several large areas of concern in fishery management, including: overfishing and the rebuilding of overfished stocks; bycatch and bycatch mortality; essential fish habitat, and; the effects of fishery management actions on fishing communities.

The Pacific Fishery Management Council (Council) amended its Pacific Coast Groundfish Fishery Management Plan (FMP) with Amendment 11 to bring the FMP into compliance with the Magnuson-Stevens Act. Amendment 11 included provisions to: amend the FMP framework that defines "optimum yield" for setting annual groundfish harvest limits; define rates of "overfishing" and levels at which managed stocks are considered "overfished;" define Pacific Coast groundfish essential fish habitat; set a bycatch management objective and a framework for bycatch reduction measures; establish a management objective to take the importance of fisheries to fishing communities into account when setting groundfish management measures; provide authority within the FMP for the Council to require groundfish use permits for all groundfish users; authorize the use of fish for compensation for private vessels conducting NMFS-approved research, and; other, lesser updates to the FMP. Once the Council had adopted Amendment 11, NMFS made the amendment and its implementing regulations available for public review and comment. Following the public review period for Amendment 11, NMFS approved all of the FMP amendment except for those provisions addressing bycatch. The bycatch provisions of Amendment 11 were sent back to the Council for new development and more thorough analysis. Amendment 13 would bring the FMP into compliance with the bycatch-related requirements of the Magnuson-Stevens Act, as well as provide analysis supporting the proposed changes and discussing alternatives to those changes.

When, on March 3, 1999, NMFS notified the Council that it had approved most of Amendment 11 to the FMP, it also notified the Council that three species (lingcod, bocaccio, and Pacific ocean perch (POP)) managed under the FMP were considered overfished, according to the definition of an overfished species given in Amendment 11. The Council was then required to provide rebuilding plans for the three overfished species within one year of that notification, in accordance with the Magnuson-Stevens Act. The Council developed draft rebuilding plans for lingcod, bocaccio, and POP, during its September and November 1999 meetings, and adopted rebuilding plans for all three species at its November meeting. Measures necessary to implement the Council-adopted rebuilding plans were incorporated into the 2000 annual specifications and management measures for Pacific Coast groundfish. Council staff submitted finalized rebuilding plans to NMFS on March 2, 2000. At its April 2000 meeting, the Council approved Amendment 12 to the FMP, which provides a framework process for developing future rebuilding plans.

In January 2000, NMFS notified the Council that two additional species, canary rockfish and cowcod, were also considered overfished. While protective measures for these two species were incorporated into the 2000 management measures (January 4, 2000, 65 FR 221,) the formal rebuilding plans will be developed over the coming year and completed for the 2001 annual specifications.

To incorporate effective rebuilding measures for the five overfished species into the 2000 annual specifications and management measures, the Council had to create management measures that were consistent with, but outside of the scope of the FMP. Therefore, the Council asked NMFS to make emergency regulatory changes concurrent with the publication of the 2000 annual specifications, so that the rebuilding measures could begin in the 2000 fishing season. NMFS incorporated the emergency regulatory changes into the 2000 annual specifications and management measures; however, emergency regulations could only be made effective for six months. Emergency regulations may be renewed for a second six-month period, but the long-term flexibility needed to manage both overfished and healthy groundfish stocks in 2001 and beyond need to be part of the FMP. Amendment 13 also broadens the scope of the FMP's framework management measures to better equip the Council to meet some of the overfishing and bycatch requirements of its FMP during the annual specifications and management measures process.

In addition to amending the FMP for consistency with Magnuson-Stevens Act bycatch provisions, and

updating the framework language of the FMP to allow more flexibility in meeting rebuilding goals for overfished stocks, this Amendment 13 updates the FMP to remove provisions for limited entry permits with provisional "A" endorsements, "B" endorsements, and designated species "B" endorsements. These endorsements were used to smooth the transition from an open access system to the limited entry program, but all current limited entry permit holders now have "A" endorsements and the three lesser endorsements have either expired or are no longer useful. Removing these endorsements from the FMP's limited entry provisions is essentially a "housekeeping" measure.

2.0 SUMMARY OF ALTERNATIVES

2.1 Issue 1 -- Definition of the term "bycatch" in the FMP

Alternative 1 (status quo - no action). The FMP defines "bycatch" as follows: "Bycatch means fish which are harvested in a fishery, but which are not sold or kept for personal use and includes economic discards and regulatory discards."

Alternative 2 – Adopted (Magnuson-Stevens Act definition). The Magnuson-Stevens Act defines "bycatch" as follows: "The term 'bycatch' means fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards. Such term does not include fish released alive under a recreational catch and release fishery management program."

2.2 Issue 2 -- Standardized Reporting Methodologies

Alternative 1 (status quo - no action). Under this alternative, the current standardized reporting methodologies would remain in place: a voluntary observer program and a voluntary logbook in the at-sea whiting fisheries; incidental groundfish landings reported in a marine mammal directed observer program for the California halibut setnet fishery, and; some dockside observer coverage in the shoreside whiting fishery, as associated with EFPs. The regulatory framework approved by the Council to require at least one observer per vessel in the at-sea whiting fishery would still be implemented for future whiting seasons.

Alternative 2 (Mandatory logbook reporting of discarded catch). This alternative would include all of Alternative 1, plus the Council would either: (a) ask the three states (Washington, Oregon, California) to revise their logbooks to allow for reporting of total catch, instead of just retained catch, or (b) bring logbooks under federal authority, with required bycatch and discard reporting.

Alternative 3 – Adopted (Implement observer program as soon as funding becomes available or with a requirement that vessels pay for observers.) This alternative includes all of Alternative 1, plus amends the FMP with general provisions for developing an observer coverage plan. Funding for the observer program would come from government or private sources, or a combination thereof. In April 2000, the Council endorsed a provision for a regulatory framework for a catcher vessel observer program in the groundfish fisheries. A list of technological supplements to this program could include, but not be limited to:

- Electronic/paper logbooks with bycatch reporting
- Catch monitoring by camera
- VMS monitoring

Alternative 4 (Implement observer program, with requirement that vessels pay for observers). Similar to Alternative 3, this alternative would include all of Alternative 1, plus allow the Council to amend the FMP to provide general provisions for developing an observer coverage plan. However, under this alternative, vessels would pay observer costs, while program and infrastructure costs would be borne by NMFS. A list of technological supplements to this program could include, but not be limited to:

- Electronic/paper logbooks with bycatch reporting
- Catch monitoring by camera
- VMS monitoring

2.3 Issue 3 -- Bycatch Reduction Provisions

Alternative 1 (status quo - no action). Under this alternative, the Council would neither amend the FMP, nor

take any actions to reduce bycatch rates in the groundfish fisheries. In all likelihood, excess capacity in the groundfish fishery and consequent bycatch rates would be unaffected, and could increase.

Alternative 2 (framework bycatch reduction goals). Under this alternative, the Council would amend the FMP to indicate its intent to deal with overfishing and overcapacity issues through its strategic plan, and when taking measures to deal with those issues, choose management options likely to reduce bycatch.

Alternative 3 (framework bycatch reduction goals, plus add full retention options.) This alternative would include all of Alternative 2, plus it would allow: (a) full retention of incidental catch in the at-sea whiting fleet for those processing vessels that carry more than one observer, and (b) full retention of landings limits overages for appropriately monitored vessels (via on-board observers, camera catch recording, etc.) delivering to shorebased processing plants.

Alternative 4 – Adopted (implement currently practicable changes to management measures). This alternative includes all of Alternative 3, allowing: (a) full retention of incidental catch in the at-sea whiting fleet for those processing vessels that carry more than one observer, and (b) full retention of landings limits overages for appropriately monitored vessels (via on-board observers, camera catch recording, etc.) delivering to shorebased processing plants. Additionally, this alternative would require implementation of management measure changes to reduce bycatch in the shore-based groundfish fisheries. Management measures that are not now practicable are described below at 4.3b. The list of management measures that could be implemented reasonably soon might include:

- Shorter fishing season and higher cumulative landings limits
- Allow permit stacking in the limited entry fleet
- Gear modification requirements
- Catch allocation to, or gear flexibility for, gear types with lower bycatch rates
- Re-examine/improve species-to-species landings limit ratios
- Time/area closures (closed "hot spots")

2.4 Issue 4 -- Annual Management Measures Framework Provisions

Alternative 1 (status quo - no action). Under this alternative, the current list of frameworked "routine" management measures would not change. The Council asked NMFS to use its emergency management authority to take management actions outside of the current routine framework for 2000. Emergency measures are viable for six months, and may be renewed for the second half of 2000. However, emergency regulatory measures may not be renewed more than once, which would mean that, for 2001 and beyond, the status quo option would leave the Council with only the frameworked routine management measures that were available for the 1999 fishery.

Alternative 2 (amend federal groundfish regulations and the FMP to incorporate the emergency measures taken in 2000 as "routine" management measures -- listed at 6.2.1 in the FMP, and at §660.323(b) in the federal groundfish regulations.)

- List of frameworked "routine" management measures for the commercial fisheries would include: limited entry cumulative landings limits that may be different based on type of gear used, and closed seasons for lingcod and rockfish.

- List of frameworked "routine" management measures for the recreational fisheries would include: size limits for canary rockfish, bocaccio, cabezon, kelp greenling, sculpin; closures for rockfish and lingcod; boat limits for cowcod; a requirement to keep the skin on rockfish; a prohibition on filleting cabezon; and hook limits.

Alternative 3 – Adopted (frameworking variation) Under this option, commercial and recreational management measures would become part of a framework for routine management measures.

- List of frameworked "routine" management measures for the commercial fisheries includes: in cases where protection of an overfished or depleted stock is required, limited entry cumulative landings limits that may be different based on type of gear used, and closed seasons for any groundfish species.

- List of frameworked "routine" management measures for the recreational fisheries models the more

broad framework for open access fisheries, so that all recreational fisheries for groundfish may be managed with bag limits, size limits, time/area closures, boat limits, hook limits, and dressing requirements.

Further, this option amends Section 6.2 of the FMP so that the first time any new measure were used (first time for a size limit, for limits on a particular species, first time for a closed season, etc.,) it could only be implemented during the two-meeting preseason process. Once adopted under an annual management measures cycle, the new measure could be adjusted as routine during the year. All routine management measures would continue to be established annually through the two-meeting preseason process, with adjustments to those measures allowable through the Council's meetings during the year.

** The purposes of either of the Alternatives 2 or 3 includes: achieving the rebuilding plans, reducing bycatch, preventing overfishing, allowing the harvest of healthy stocks as much as possible while protecting and rebuilding overfished and depleted stocks, and equitably distributing the burdens of rebuilding among the sectors.

2.5 Issue 5 -- Removing Limited Entry Permit Gear Endorsements Other than "A" Endorsement (Housekeeping Measure)

Alternative 1 (status quo - no action). The FMP provides for four different gear endorsements, the "A" endorsement, the provisional "A" endorsement, the "B" endorsement, and the designated species "B" endorsement. Of those, only the "A" endorsement is currently in use.

Alternative 2 – Adopted (remove all of the limited entry permit endorsements other than the "A" endorsement from FMP). Under this alternative, the three unused gear endorsements (provisional "A," "B," and designated species "B") are removed from the FMP.

Alternative 3 (remove "B" and designated species "B" endorsements, update provisional "A" endorsement.) Under this alternative, the provisional "A" endorsement would be updated so that it is only available in the future to vessels that used gear during the window period that is now prohibited by either state or federal law and with that gear, made sufficient landings to meet the minimum landing requirements for legal gears.

** None of the above alternatives would preclude the design of future gear or other permit endorsements, or of other access limitation programs.

3.0 AFFECTED ENVIRONMENT

3.1 Physical and Biological Characteristics of the Pacific Coast Groundfish Environment

The Pacific Coast Groundfish FMP manages 82 species over a large and ecologically diverse area, from the U.S.-Canada border to the U.S.-Mexico border, and extending westward from the coast out to the 200 nautical mile limit of the Exclusive Economic Zone (EEZ). Marine habitat for Pacific coast groundfish includes estuaries, rocky sub-surface pinnacles, sandy plains of the continental shelf, deep ocean canyons, and other habitat types. A thorough description of the habitat used by Pacific coast groundfish is provided in the 1998 Essential Fish Habitat appendix to the FMP (NMFS, 1998.)

In the FMP, the 82 managed species are divided as follows: sharks (3 spp.), skates (3 spp.), ratfish (1 sp.), morids (1 sp.), grenadiers (1 sp.), roundfish (6 spp.), rockfish (55 spp.), and flatfish (12 spp.) Of these, fewer than 20 species have ever had comprehensive stock assessments. Each year, assessments are conducted on 5-10 species, typically as part of a three-year rotation. Most of the available information about life histories and distribution of groundfish species is included or referenced in the 1998 Essential Fish Habitat appendix.

Stock assessments for Pacific Coast groundfish are conducted by staff scientists of the California Department of Fish and Game (CDFG), Oregon Department of Fish and Wildlife (ODFW), Washington Department of Fish and Wildlife (WDFW), Oregon State University (OSU), and the Southwest, Northwest, and Alaska Fisheries Science Centers of NMFS. These stock assessments are published annually as appendices to the Council's Stock Assessment and Fishery Evaluation (SAFE) document. [Annual SAFE documents and appendices are available from the Council office.]

An Acceptable Biological Catch (ABC) is established for every stock (a species or species group) where

enough information is available. However, numerical Optimum Yields (OYs) are not established for every stock, especially where harvest has been less than ABC. Species and species groups with OYs include lingcod, Pacific whiting, sablefish, POP, shortbelly rockfish, shortspine thornyhead, longspine thornyhead, widow rockfish, chilipepper rockfish, splitnose rockfish, the minor rockfish complexes (northern and southern for nearshore, continental shelf, and continental slope species,) bocaccio, canary rockfish, yellowtail rockfish, and Dover sole.

Eight species are believed to be above their precautionary thresholds of stock size at least 40% of its unfished biomass level: Dover sole (increasing abundance trend), English sole (trend unknown), Petrale sole (trend unknown), shortbelly rockfish (trend unknown), longspine thornyhead (declining), black rockfish (declining), chilipepper rockfish (declining if recent recruitment is low), and blackgill rockfish (declining).

Species near target biomass levels include Pacific whiting, yellowtail rockfish (39% of unfished level,) and sablefish (37%). There are seven species below their target biomass levels: widow rockfish (29%), shortspine thornyhead (32%), canary rockfish (7% in the south and 20% in the north), cowcod (less than 10%), bocaccio (about 2%), POP (13%), and lingcod (8.8%, north; 7.5%, south.) Darkblotched rockfish is also thought to be below the target biomass level. Of these, POP, bocaccio, lingcod, canary rockfish, and cowcod have been declared overfished. The relative abundance and trends of Pacific cod, other flatfish, other rockfish, and other species categories are unknown; relative abundance of arrowtooth flounder is unknown but believed to be declining (PFMC, December 1999.)

More detailed information on the stock status of each of these species is available in the stock assessments associated with the annual SAFE document process, as well as in the Environmental Assessment and Regulatory Impact Review for the 2000 groundfish ABC and OY specifications and implementing management measures for the Pacific coast groundfish fishery, which are available from the Council office (PFMC, December 1999.) Rebuilding plans for the three species that were designated as overfished in March 1999 (POP, bocaccio, lingcod) are also available from the Council office.

3.2 Characteristics of the Groundfish Industry and Fishery

Commercial Fishery

The Pacific coast groundfish fishery is a year-round, multi-species fishery that takes place off the coasts of Washington, Oregon, and California. Most of the Pacific coast non-tribal, commercial groundfish harvest is taken by the limited entry fleet. The groundfish limited entry program was established in 1994 for trawl, longline, and trap (or pot) gears. There are also several open access fisheries that take groundfish incidentally or in small amounts; participants in those fisheries may use, but are not limited to longline, vertical hook-and-line, troll, pot, setnet, trammel net, shrimp and prawn trawl, California halibut trawl, and sea cucumber trawl. In addition to these non-tribal commercial fisheries, members of the Makah, Quileute, Hoh, and Quinault tribes participate in commercial, and ceremonial and subsistence fisheries for groundfish off the Washington coast. Participants in the tribal commercial fishery use similar gear to non-tribal fishers who operate off Washington, and groundfish caught in the tribal commercial fishery is sold through the same markets as non-tribal commercial groundfish catch.

One of the primary goals of the Pacific coast groundfish FMP is to keep the fishery open throughout the entire year for most segments of the fishery (See FMP goals and objectives at section 2.0). Harvest rates in the limited entry fishery are constrained by annual harvest guidelines, two-month or one-month cumulative period landings limits, individual trip limits, size limits, species-to-species ratio restrictions, and other measures, all designed to control effort so that the allowable catch is taken at a slow rate that will stretch the season out to a full year. Cumulative period catch limits are set by comparing current or previous landings rates with the year's total available catch. Landing limits have been used to slow the pace of the fishery and stretch the fishing season out over as many months as possible, so that the overall harvest target is not reached until the end of the year. Open access fisheries that land groundfish are more commonly targeting on non-groundfish species with some incidental groundfish landings, although there is a significant open access hook-and-line fleet that targets and lands groundfish.

There are about 500 vessels with Pacific coast groundfish limited entry permits, of which approximately 55% are trawl vessels, 40% are longline vessels, and 5% are trap vessels. Each permit is endorsed for a particular gear type and that gear endorsement cannot be changed, so the distribution of permits between gear types is fairly stable. The number of total permits will only change if multiple permits are combined to create a new permit with a longer length endorsement, or if a permit is not renewed. Limited entry permits can be sold and leased out by their owners, so the distribution of permits between the three states often shifts. At

the beginning of 2000, roughly 39% of the limited entry permits were assigned to vessels making landings in California, 37% to vessels making landings in Oregon, and 23% to vessels making landings in Washington.

Because open access groundfish landings vary according to which non-groundfish fisheries are landing groundfish as bycatch, the number of open access boats that land groundfish accordingly varies with the changes in those non-groundfish fisheries. In recent years, however, there have been approximately 1,500 vessels per year that have been making small groundfish landings against open access allocations. Of these vessels, about 1,000 land their catch in California, about 400 land their catch in Oregon, and about 100 land their catch in Washington.

Limited entry fishers who use bottom trawl, longline, and pot gears target on many different species, with the largest landings by volume (other than Pacific whiting) from these species: Dover sole, sablefish, thornyheads, widow rockfish, and yellowtail rockfish. There are 55 rockfish species managed by the Pacific coast groundfish FMP and, taken as a whole, rockfish landings represent the highest volume of non-whiting landings in the Pacific coast commercial groundfish fishery.

In addition to these mixed-species fisheries, there is a distinct mid-water trawl fishery that targets Pacific whiting (*Merluccius productus*). Pacific whiting landings are significantly higher in volume than any other Pacific coast groundfish species. In 1998, whiting accounted for approximately 66% of all Pacific coast commercial groundfish shoreside landings by weight. The Pacific whiting fleet includes catcher boats that deliver to shore-based processing plants and to at-sea processor ships, as well as catcher-processor ships. Whiting is a high volume species, but it commands a relatively low price per pound, so it accounts for only about 9% of all Pacific coast commercial groundfish shoreside landings by value. [For more specific information on distribution of groundfish catch by volume and by value see the 1999 SAFE (PFMC, October 1999.)

With the exception of the portion of Pacific whiting catch that is processed at sea, all other Pacific coast groundfish catch is processed in shore-based processing plants along the Pacific coast. By weight, 1998 commercial groundfish landings were distributed among the three states as follows: Washington, 13%; Oregon, 69%; California, 18%. By value, commercial groundfish landings are distributed among the three states as follows: Washington, 15%; Oregon, 43%; California, 41% (PFMC, October 1999.) The discrepancies between the Oregon and California portions of the landings are expected because Oregon processors handle a relatively high percent of the shore-based whiting landings, a high volume, low value fishery. Conversely, California fishers land more of the low volume, high value species as a proportion of the total state-wide catch than Oregon fishers.

Catcher vessel owners and captains employ a variety of strategies to fill out a year of fishing. Fishers from the northern ports may fish in waters off of Alaska, as well as in the West Coast groundfish fishery. Others may change their operations throughout the year, targeting on salmon, shrimp, crab, or albacore, in addition to various high-value groundfish species, so as to spend more time in waters close to their communities. Factory trawlers and motherships fishing for or processing Pacific whiting off of the West Coast usually also participate in the Alaska pollock seasons, allowing the vessels and crews to spend a greater percentage of the year at work on the ocean. Commercial fisheries landings for species other than groundfish vary along the length of the coast. Dungeness crab landings are particularly high in Washington state, squid, anchovies, and other coastal pelagics figure heavily in California commercial landings, with salmon, shrimp, and highly migratory species like albacore more widely distributed, and varying from year to year.

Whiting has been processed into surimi, sold in headed and gutted form, filleted, and converted to meal and oil. Other, higher quality fish like Petrale sole are dressed and rushed to fresh, local markets as quickly as possible, while most sablefish is frozen and sent to foreign markets. The quantity of groundfish caught off of the West Coast is just a small percent of the amount of groundfish caught in federal waters off Alaska, so West Coast groundfish moves through many of the same markets as Alaska groundfish, taking prices set by the northern fleet.

Recreational Fishery

All three states and NMFS collect data on marine recreational fisheries for groundfish, but information from four sources has not yet been calibrated into a unified database that will allow accurate comparison of recreational landings and fishery participation levels. The available information provides some characterization of the recreational groundfish fishery off the Pacific Coast. NMFS data collection on Pacific Coast marine recreational fishing surveys four separate modes of marine recreational fishing: (1) fishing from

piers, docks, and jetties; (2) fishing from beaches and banks; (3) fishing from party and charter boats; and (4) fishing from private and rental boats. According to NMFS data from 1998, California recreational groundfish catch is moderately higher than in Oregon, and Washington recreational groundfish catch is significantly lower than in either of the other two states. Rockfish are caught in higher numbers than any other type of fish, with the strongest catch levels in nearshore species such as black rockfish and blue rockfish. Marine recreational fisheries also have relatively strong landings of lingcod and cabezon. Recreational fishing is generally managed by the states, although federal regulations are implemented for lingcod and rockfish, including species-specific bag limits, boat limits, and size limits. (Recreational fisheries data is collected through the Recreational Fishery Information Network, managed for the Pacific Coast by the Pacific States Marine Fisheries Commission -- online, see www.psmfc.org/recfin)

3.3 Background on Pacific Coast Groundfish Fishery Management to Account for and Minimize Bycatch (Issue 3)

When the FMP went into effect in 1982, winter weather was the only obstacle to a year-round groundfish fishery, and the FMP set the fishing year at January 1 through December 31. One of the original objectives of the FMP was to, "Provide a favorable climate for existing domestic commercial and recreational groundfish fisheries within the limitations of other objectives and guidelines. When change is necessary, institute the regulation which accomplishes the change while minimizing disruption of current domestic fishing practices, marketing procedures and environment." This objective of "minimizing disruption of current domestic fishing practices" has remained a management objective through various iterations of the FMP, and has been combined with current objectives to ". . . promote year round availability of quality seafood to the consumer," and ". . . promote year round marketing opportunities and establish management policies that extend those sectors (for which year round marketing is beneficial) fishing and marketing opportunities as long as practicable during the fishing year" (PFMC, 1982.) Taken together, these objectives have resulted in the Council's enduring policy of year-round trip limit management for most groundfish fisheries.

Active groundfish management essentially began in 1983, when the Council introduced the first numerical OYs for several managed species, and trip limits for widow rockfish, the *Sebastes* complex, and sablefish. The first landings limits the Council used were "per trip" limits, which were intended to slow landings somewhat so that the fleet would not achieve species' annual harvest guidelines early in the year. Almost all domestic discards in the early years of groundfish management were market-induced discards, where fishers were throwing away unmarketable species or unmarketable sizes of targeted species. Domestic fisheries management did not account for these discards; targets for landed catch were set equal to ABC. For the foreign and joint venture fisheries, the Council set incidental catch allowances for non-target species.

Incidental catch allowances for foreign and joint venture fisheries, as percentages of target species harvested, through 1993					
Sablefish	POP	rockfish excluding POP	flatfish	jack mackerel	other
0.173%	0.062%	0.738%	0.1%	3.0%	0.5%

Over time, foreign and joint venture fisheries dwindled, and the Council introduced trip limits for a greater number of species taken in the domestic fisheries. Effort increased in the domestic fishery, and trip limits became more restrictive to control harvest rates. The Council realized that managing a variety of species under trip limits could lead to increased rates of discards for some species. Bycatch and discards can result from a regime of multiple trip limits because a fisher might target gear on a complex of species, and then find that in order to catch the full limit on one species, he has to exceed the limit on other species, and then discard that excess. To address this issue, the Council shifted away from per trip limits for most species and towards monthly cumulative limits. Cumulative limits were preferable to per trip limits because a fisher could accumulate species at different rates over different trips, without having to discard fish each trip because of exceeding per trip limits. Once the Council had seen that monthly landings limits would continue to allow a year-round fishery, it introduced two-month cumulative limits to again reduce the likelihood that fishermen would have to discard overages of particular species within a multi-species complex fishery.

In addition to these efforts to craft the cumulative landings limit regime to reduce discards, the Council used several regulatory measures to reduce incidental catch of juvenile fish that would be discarded as unmarketable, and to reduce bycatch of protected salmon species. In the early 1990s, the Council experimented with different combinations of gear regulations, first requiring larger trawl mesh sizes in net codends, and then moving to requirements for larger mesh sizes throughout trawl nets. By 1995, bottom trawl

nets were required to have a minimum of 4.5 inch mesh, double-walled (lined) codends were prohibited, and the use of chafing gear was restricted (60 FR 13377, March 13, 1995, codified at 50 CFR 660.322.) All of these measures were intended to give smaller-size fish the opportunity to escape from the trawl net, reducing the likelihood that those fish would be caught and then discarded unused.

Beyond measures to protect small and juvenile groundfish, the Council brought salmon and whiting fishers together to address salmon bycatch in the whiting fishery. Reducing bycatch of threatened and endangered salmon species was particularly important to the Council as it looked for ways to reduce at sea catch and interception of protected salmon stocks to soften management restrictions for the directed salmon fisheries. In 1993, the Council established Klamath River and Columbia River salmon conservation zones and Eureka area trip limit restrictions to prohibit or reduce whiting fishing in areas of high salmon interception rates (58 FR 21261, codified at 50 CFR 660.323.) The whiting fleets now also work to keep their chinook salmon interception below a voluntary threshold of 0.05 chinook salmon per metric ton of whiting.

At the same time that the Council was experimenting with more flexible cumulative landings limit regimes, gear restrictions, and closed areas to reduce bycatch, domestic fishing capacity in the groundfish fleet was growing and outstripping resource productivity. We now also know that stock assessment information in the 1980s and early 1990s was not adequate to draw a clear picture of west coast rockfish productivity. Harvest rates that had seemed reasonable given then-current scientific information are now proving to have been too aggressive for sustainable harvest on the very low productivity west coast rockfish stocks (Myers, et al, 1999; Ralston et al, PFMC, 2000.) The combination of increasing fishing capacity and decreasing OYs led to ever more restrictive cumulative landings limits. The Council's Groundfish Management Team (GMT) became concerned about the effects of a restrictive cumulative landings limit regime on rates of bycatch and discard, and announced in April 1990 its plans to begin to factor discards into setting Acceptable Biological Catches (ABCs) for the 1991 fishing year (PFMC GMT, 1990.) In August 1990, the Council finalized Amendment 4 to the FMP, which introduced the practice of distinguishing between ABCs and harvest guidelines to, among other things, account for fishing mortality beyond landed catch numbers (PFMC, August 1990.)

In 1991 and 1992, the Council's bycatch accounting policies took shape. For 1991, the Council recommended ABCs that accounted for discards for sablefish, Dover sole, and widow rockfish. The widow rockfish coastwide ABC of 7,000 mt was set equal to the landed catch OY, but in setting the ABC, 1,000-1,200 mt discard was assumed above the 7,000 mt landed catch. The sablefish coastwide ABC was reduced by 12.7% to account for discards, and the OY was set equal to landed catch. Although Dover sole was managed under a coastwide ABC in 1991, only the contributing ABCs for the Eureka and Columbia areas were reduced for discards, with Eureka's ABC reduced by 5.7% and Columbia's ABC reduced by 13% (56 FR 465, January 8, 1991.)

In 1992, the Council expanded its list of species with ABCs set to account for discard to include yellowtail rockfish. Widow rockfish again had a coastwide ABC/landed catch of 7,000 mt, with a 1,000-1,200 mt discard assumed above the ABC (14-17%). Similarly, the 1991 sablefish landed catch was the same amount that it had been in 1991 (8,900 mt), with no change to the 12.7% reduction for discards. Dover sole in the Eureka area was reassessed in 1991, resulting in a change in the Eureka area ABC, and a change in the discard reduction for Eureka area Dover sole from 5.7% in 1991 to 9.6% in 1992. Dover sole ABCs for other statistical areas were unchanged. Yellowtail rockfish discards were assumed to be 16% of the ABC, and were factored inseason, as the fisheries progressed. The assumption that yellowtail rockfish was discarded at a rate of 16% of the ABC was based on a 1988 study (Pikitch, et al, "An evaluation of the effectiveness of trip limits as a management tool,") which had estimated the widow rockfish discard rate at 16% (57 FR1654, January 15, 1992.)

Discard rates for the years 1993-2000 are described in a table, below. In addition to the discard reductions described in the table, discarded bycatch in the at-sea Pacific whiting fishery is measured by observers and is counted towards the harvest guidelines of the incidentally-caught species inseason. Inseason accounting for groundfish discards in the whiting fishery began in 1994 (*Federal Register* citations for annual specifications 1993-2000 cited in Section 9.0.)

Table 1: Discard rates and inseason bycatch accounting, 1993-2000

	2000	1999	1998	1997	1996	1995	1994	1993
Widow rockfish	300 mt subtracted from LE allocation for bycatch in whiting fishery, then 16% subtracted from what remains	16% of LE allocation	16% of total catch HG	16% of ABC	16% of ABC	16% of ABC	Discards factored into setting ABC, ABC=landed catch	Discards factored into setting ABC, ABC=landed catch
Yellowtail rockfish	600 mt subtracted from LE allocation for bycatch in whiting fishery, then 16% subtracted from what remains	600 mt subtracted from LE allocation for bycatch in whiting fishery, then 16% subtracted from what remains	16% of total catch HG	16% factored inseason	16% of ABC from north of Cape Lookout	HG = TC, discards factored inseason, 16% assumed	HG = TC, discards factored inseason, 16% assumed	HG = TC, discards factored inseason, 16% assumed
Canary rockfish	**Entire ABC/ OY lowered to rebuild depleted stock.**	16% of LE allocation	16% of total catch HG	220 mt subtracted from Van/Col ABC (~18%)	150 mt subtracted from Van/Col ABC (~15%)	150 mt subtracted from Van/Col ABC (~15%)	HG = TC, discards factored inseason, 16% assumed	N/A
Bocaccio rockfish	**Entire ABC/ OY lowered to rebuild overfished stock.**	N/A -- After 1994, the policy of assuming discards of bocaccio was discontinued.					Discards factored into setting ABC, ABC=landed catch, 16% assumed	Discards factored into setting ABC, ABC=landed catch, 16% assumed
Pacific ocean perch	16% of total catch OY	16% of total catch OY	ABC = 0, LC=TC-16% LC=650 mt	ABC = 0, LC=TC-16% LC=750 mt	ABC = 0, LC=TC-16% LC=750 mt	ABC = 0, LC=TC-16% LC=1300 mt	ABC = 0, LC=TC-16% LC=1300 mt	ABC = 0 LC = 1,550 mt, discards factored inseason
Splitnose rockfish	**Entire ABC/ OY lowered to account for less rigorous stock assessment.**	16% of total catch OY	N/A -- Before 1999, the splitnose rockfish ABC and HG/OY were included in the overall *Sebastes* ABC and HG/OY					

	2000	1999	1998	1997	1996	1995	1994	1993
Longspine thorny-heads	9% of OY	9% of total catch HG	9% of total catch HG	HG(LC) = ABC -1000 mt, to reduce SSTH bycatch	HG(LC) = ABC -1000 mt, to reduce SSTH bycatch	HG(LC) = ABC -1000 mt, to reduce SSTH bycatch	Both thornyhead spp. in one LC HG, 1994 HG derived by subtracting 8% from 1993 HG for discards	Both thornyhead spp. in one LC HG, expecting that SSTH landings will exceed ABC and that LSTH landings will fall short of ABC
Shortspine thorny-heads	30% of LE allocation	30% of LE allocation	30% of total catch HG	8% of total catch HG, but landed catch HG exceeded ABC by 38%	HG(LC) exceeds ABC by 50%, to allow greater harvest of LSTH	HG(LC) exceeds ABC by 50%, to allow greater harvest of LSTH		
Dover sole	5% of total catch OY	5% of total catch OY	5% of total catch HG	5% of total catch HG	5% of ABC	5% of Col. ABC	Discards factored into setting ABC, ABC=landed catch	Discards factored into setting ABC, ABC=landed catch
Sablefish	10% of ABC, north of 36°	10% of ABC, north of 36°	10% of ABC, north of 36°	10% of ABC, north of 36°	10% of ABC, north of 36°	10% of ABC, north of 36°	Discards factored into setting ABC, ABC=landed catch	Discards factored into setting ABC, ABC=landed catch
Lingcod	**Entire ABC/ OY lowered to rebuild overfished stock.**	19% of LE allocation	25% of assumed trawl catch, applied inseason	N/A -- Discard reduction not applied for lingcod before 1998				

In addition to measures taken to account for bycatch and discards in the setting of ABCs and OYs, annual management measures have incorporated a variety of strategies to reduce bycatch in the groundfish fishery. For trawl vessels, cumulative landings limits for the "DTS complex" have been based on catch ratios between the four species in the complex -- Dover sole, thornyheads (shortspine and longspine), and sablefish. Often, harvest of the more abundant species in the DTS complex (longspine thornyhead, Dover sole) is curtailed to prevent overharvest of the less abundant species (shortspine thornyhead.) Similar species complex management was used for *Sebastes* complex species prior to 2000, with some particular *Sebastes* species managed by harvest and trip limits within the overall *Sebastes* complex harvest and trip limits. As described above, the Council also set two-month cumulative landings limit periods for some species, which reduced the number of cumulative limit periods in the year as well as the number of opportunities for meeting and exceeding landings limits.

Management measures for 2000 include new and creative ways of particularly reducing the interception of overfished species (65 FR 221, January 4, 2000.) The Council has acknowledged that simply lowering the overall harvest limits of overfished and depleted species is not adequate to protect and rebuild those species. Landings of lingcod, are prohibited for the months of January through April and November through December. These closures are expected to protect lingcod during the spawning and nesting period. When lingcod are caught by hook-and-line methods, they can often be released alive. Complete prohibition of landings is a reasonable management measure for lingcod, because it discourages directed targeting and requires release of fish that may still be viable after having been caught.

Other overfished and depleted species are rockfish, which generally cannot be released alive, regardless of the method of catch. Thus, the Council's challenge with these species has been to reduce fisher incentives to target depleted species and to reduce opportunities where fishers might incidentally catch large amounts of depleted species, while still allowing small landings of these species when they are caught incidentally. Rockfish landings limits were set to minimize discards by distributing species cumulative landings limits at levels that encourage fishers to direct fishing effort on healthy species when those species are most concentrated, or when bycatch of other species is expected to be relatively low. In particular, cumulative landings limits are set to move fishing effort away from the continental shelf, which is the primary habitat of several of the overfished species. Rockfish cumulative landings limits have also been set higher in the summer months, when directed targeting on healthy stocks is less likely to result in incidental harvest of depleted and overfished stocks. South of Cape Mendocino, open access, limited entry non-trawl, and recreational fisheries were closed for two months in 2000, allowing higher commercial landings limits and recreational bag limits for the remaining ten months in the fishing season. The Council expected that a shorter season and higher landings and bag limits would reduce incidental take of overfished and depleted species.

The 2000 management measures also introduce differential landings limits for limited entry trawlers operating with different trawl gear configurations (bottom trawling with footropes greater than 8 inches in diameter, bottom trawling with footropes smaller than 8 inches in diameter, and midwater or pelagic trawling.) Trawling with footropes that have roller gear or other devices designed to bounce over rough rockpiles tends to allow those vessels greater access to prime rockfish and lingcod habitat. Therefore, landings of shelf rockfish have been prohibited if large footrope trawls (roller gear) are used; small amounts of shelf rockfish bycatch are allowed to be landed if small footrope trawls are used, and; targeting healthy shelf rockfish stocks is encouraged only if midwater trawls are used. These gear requirements have not been tested for whether they will reduce directed and incidental harvest of overfished species. There are no discard records for historic fishing practices, and new management changes not been tested through scientific observation.

Finally, at the GMT's recommendation, the Council revised its historical practice of managing the *Sebastes* complex as simply northern and southern units. In recent years, rockfish species without assessments and those with less rigorous assessments were managed under generic *Sebastes* complex landings limits. The GMT had been concerned that this approach provided opportunity to harvest lower-abundance, higher-valued species at unsustainable rates. In response to these concerns, the Council separated the ABCs/OYs for chilipepper and splitnose rockfishes from the Southern *Sebastes* complex for the 1999 fishery. Conversely, concerns also developed that rebuilding plans for overfished species could result in unnecessarily severe restrictions for the entire complex than would be the case if sub-groups of these species could be developed. For 2000, the GMT developed species lists for three sub-groups of rockfish -- Nearshore, Shelf, and Slope-- for the Northern (U.S. Vancouver, Columbia and Eureka subareas combined) and Southern (Monterey and Conception subareas combined) areas. Organizing *Sebastes* species into groups based on the most common catch associations is expected to equalize the harvest rates for most rockfish stocks, and to reduce the likelihood of overharvesting both overfished and depleted species, and species for which there is relatively

little stock assessment information.

All of the new measures taken in 2000, and measures taken in prior years to manage for multi-species interactions, illustrate that regulatory efforts to reduce bycatch tend to have multiple management goals -- from protecting overfished and depleted species, to preventing overharvest of species of unknown abundance, to acknowledging that vessels using different gear types require different harvest strategies, to matching within-year harvest rates to within-year abundance and congregation habits of managed species. For a multi-species fishery, the catching of species other than the particularly targeted species is not necessarily a problem. Discard of non-targeted species, whether for economic or regulatory reasons, is a problem, and one that the Council has worked to reduce in its ongoing efforts to address a wide range of management issues. There is, however, no scientific confirmation for the effectiveness of these management activities in meeting the Council's policy goals.

3.4 Background on Annual Management Measures Process and Changes for 2000 Fisheries (Issue 4)

The FMP specifies how changes to groundfish management policies and regulations are to be made in Section 6.0, "Management Measures." Policy-making processes are tiered, with some policy and regulatory changes requiring at least two Council meetings and a regulatory amendment, and other regulatory changes requiring discussion at just a single meeting followed by notification in the Federal Register. Major policy changes usually require FMP amendments, while the shortest rulemaking process is generally only available for inseason changes to cumulative landings limits. In between the two extremes of the FMP amendment and the single meeting and notice action, lies the full rulemaking and the abbreviated rulemaking process. The abbreviated rulemaking process allows the Council to take certain actions needing swift implementation by discussing those actions with the public and with their advisory entities over two Council meetings, with the results recommended for publication by NMFS in the Federal Register.

Each year at its September and November meetings, the Council uses the abbreviated rulemaking process to develop its recommendations for groundfish specifications and management measures. Once the Council has formalized its recommendations, NMFS evaluates and publishes the recommendations as the "annual specifications and management measures." These measures are published in a single Federal Register notice at the beginning of every January. Annual specifications provide ABCs, OYs, and harvest guidelines for managed species, and management measures are the specific landings limits, size limits, and time/area closures that are set in place for one calendar year. As the fishing year progresses, the Council tracks harvest rates for each sector of the commercial fishery, and may recommend adjusting management measures to either allow more access to, or to restrict harvest of, a particular species or species group. For the recreational fisheries, the Council sets aside a portion of the available harvest of recreationally-targeted species and sets recreational fishery management provisions in place at the beginning of the year.

While a framework allows the Council to publish annual specifications and management measures through a two-meeting process and a single Federal Register notice, adding to the list of measures that are considered "routine" requires a longer process of consideration and development. Management measures are designated as routine in the federal groundfish regulations through the federal rulemaking process, which requires two or more Council meetings.

In the federal regulations, routine management measures are divided into those affecting the commercial fisheries (both limited entry and open access) and those affecting the recreational fisheries. For both commercial and recreational fisheries, routine management measures are intended to keep groundfish landings within annual harvest levels. In the commercial fisheries, trip landing and frequency limits may also be applied as routine management measures for the following reasons: to extend the fishing season; to minimize disruption of traditional fishing and marketing patterns; to reduce discards; to discourage target fishing while allowing small incidental catches to be landed; to allow small fisheries to operate outside the normal season; and, for the open access fishery only, to keep landings at the historical proportions of the 1984-88 window period. Size limits may also be applied as routine management measures in the commercial fisheries, either to protect juvenile fish or to extend the fishing season.

Routine management measures for commercial fisheries include (by species and gear):

(A) Widow rockfish--all gear--trip landing and frequency limits.
(B) Sebastes complex--all gear--trip landing and frequency limits.
(C) Yellowtail rockfish--all gear--trip landing and frequency limits.
(D) Pacific ocean perch--all gear--trip landing and frequency limits.
(E) Sablefish--all gear--trip landing, frequency, and size limits.

(F) Dover sole--all gear--trip landing and frequency limits.
(G) Thornyheads (shortspine thornyheads or longspine thornyheads, separately or combined) --all gear--trip landing and frequency limits.
(H) Bocaccio--all gear--trip landing and frequency limits.
(I) Pacific whiting--all gear--trip landing and frequency limits.
(J) Lingcod--all gear--trip landing and frequency limits; size limits.
(K) Canary rockfish--all gear--trip landing and frequency limits.
(L) All groundfish, separately or in any combination--any legal open access gear (including non-groundfish trawl gear used to harvest pink shrimp, spot or ridgeback prawns, California halibut or sea cucumbers in accordance with the regulations in this subpart)--trip landing and frequency limits.

For the recreational fisheries, bag limits may be applied as routine management measures to spread the available catch over a large number of anglers, to avoid waste, or for consistency with state regulations. Size limits may also be applied as routine management measures in the recreational fisheries, either to protect juvenile fish, to enhance the quality of the recreational fishing experience, or for consistency with state regulations.

Routine management measures for recreational fisheries (by species and gear):
(A) Lingcod -- all gear -- bag and size limits.
(B) Rockfish -- all gear -- bag limits.

In September and November 1999, the Council faced the challenge of crafting the 2000 management measures to incorporate protective regulations for harvest activities affecting overfished and depleted fish stocks. While the Council does not usually need to work outside of the management measures already designated as "routine" in federal groundfish regulations, protecting overfished and depleted stocks spurred some creative thinking on the parts of the Council, its advisory entities, and the public. To protect overfished and depleted stocks, the Council recommended several measures for 2000 that were not part of the established list of "routine" management measures, and asked NMFS to use its emergency rulemaking authority to implement those recommendations. Because the new measures were in keeping with the goals and objectives of the FMP, NMFS agreed to the emergency use of these new measures for six months from the date of the publication of the Federal Register notice of 2000 specifications and management measures (January 4 through July 3, 2000.) Measures set in place under emergency authority for the commercial fisheries include limited entry cumulative landings limits that may be different based on type of gear used and closed seasons for lingcod and rockfish. Measures set in place under emergency authority for the recreational fisheries include: size limits for canary rockfish, bocaccio, cabezon, kelp greenling, sculpin; closures for rockfish and lingcod; boat limits for cowcod; a requirement to keep the skin on rockfish; and a prohibition on filleting cabezon; and hook limits. Regulatory measures implemented through emergency authority may be used for a single six-month period, and reauthorized for a second six-month period if it is understood that the Council will be working on an FMP or regulatory amendment to formalize the emergency measures during that time. Federal agencies may not indefinitely renew actions taken on an "emergency" basis.

In addition to the three species that have been designated as overfished, and for which the Council has prepared rebuilding plans (lingcod, POP, bocaccio,) NMFS has notified the Council that canary rockfish and cowcod also meet the FMP definition of overfished species. Given the need to protect these five species, and the further possibility of other groundfish species being designated as overfished, the Council may wish to adjust for additional flexibility in the annual management measures process. If the list of routine management measures were so amended, the reasons for using those measures would include: for the purposes of achieving the rebuilding plans, reducing bycatch, preventing overfishing, allowing the harvest of healthy stocks as much as possible while protecting and rebuilding overfished and depleted stocks, and equitably distributing the burdens of rebuilding among the sectors.

4.0 CONSEQUENCES OF PROPOSED ACTION AND ALTERNATIVES

4.1 Issue 1 -- Definition of the term "bycatch" in the FMP

Issue 1	environmental effects	socio-economic effects
Alternative 1	none	none
Alternative 2 (Adopted)	none	none

Alternative 1 (status quo - no action). The FMP defines "bycatch" as follows: "Bycatch means fish which are harvested in a fishery, but which are not sold or kept for personal use and includes economic discards and regulatory discards."

Alternative 2 – Adopted (Magnuson-Stevens Act definition). The Magnuson-Stevens Act defines "bycatch" as follows: "The term 'bycatch' means fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards. Such term does not include fish released alive under a recreational catch and release fishery management program."

DISCUSSION. When first addressing the 1996 Sustainable Fisheries Act requirements, the Council recommended amending the FMP's definition of bycatch to: "Bycatch means fish which are harvested in a fishery, but which are not sold or kept for personal use *or donated to a charitable organization* and includes economic discards and regulatory discards." NMFS rejected this definition because it went beyond the scope of the Magnuson-Stevens definition of "bycatch" to include fish donated to a charitable organization.

The status quo FMP definition conforms with but does not exactly match the definition of "bycatch" in the Magnuson-Stevens Act, as it does not include the reference to a recreational catch and release fishery management program. The status quo definition is reasonable for the Pacific Coast groundfish fishery because the FMP does not include a recreational catch and release fishery management program. However, the Council wished to amend the FMP definition of "bycatch" to match the definition in the Magnuson-Stevens Act, so that this definition would not have to be amended if a future Council implements a recreational catch and release fishery management program. It should be noted that the Magnuson-Stevens Act definitions excludes only fish released *alive*, not all fish released under a catch and release fishery management program.

The effects on the environment and on the fishing community of choosing either of these definitions for the FMP is the same. Only the status quo definition is relevant to Pacific coast groundfish fisheries, so the effect of choosing Alternative 2 would be neither greater nor lesser than the effect of retaining the status quo definition. It is interesting to note that the Magnuson-Stevens Act's definition of bycatch emphasizes *use* of harvested resources, which means that if particular species are caught in a fishery incidentally to the catch of target species, the incidentally caught species are only considered "bycatch" if they are not retained and used. With this emphasis, the Magnuson-Stevens Act must rely on proper catch and bycatch accounting to ensure that activities that follow out of the Act do not have a negative effect on the environment.

4.2 Issue 2 -- Standardized Reporting Methodologies for Catch and Bycatch Accounting

Issue 2	environmental effects	socio-economic effects
Alternative 1	+(whiting)/- (non-whiting)	- (long-term)
Alternative 2	+(whiting)/- (non-whiting)	-- (long-term)
Alternative 3 (Adopted)	++	+/-
Alternative 4	++	+(long-term)/--(near-term)

Alternative 1 (status quo - no action). Under this alternative, the current standardized reporting methodologies would remain in place: a voluntary observer program and a voluntary logbook in the at-sea whiting fisheries; incidental groundfish landings reported in a marine mammal directed observer program for the California

halibut setnet fishery, and; some dockside observer coverage in the shoreside whiting fishery, as associated with EFPs. The regulatory framework approved by the Council to require at least one observer per vessel in the at-sea whiting fishery would still be implemented for future whiting seasons.

This alternative would have a positive effect on the environment affected by the at-sea whiting fisheries, but an otherwise negative effect on the environment, and could have a consequent negative effect on the fishing community. Under this alternative, observer coverage in the at-sea whiting fleet would still become mandatory and dockside observer coverage would continue. However, this alternative would not provide any bycatch or discard reporting for the non-whiting groundfish fleets. Because the whiting fleets have been under fairly consistent observation for several years, observer programs have measured catch and bycatch rates in these fisheries. Bycatch and discard rates in the non-whiting fleets are unknown, and the groundfish management would likely require continued extrapolation of discard data from the 1988 Pikitch study mentioned above in Section 3.3. Unmeasured discard mortality could have a profound effect on the health of managed fish stocks. If discard mortality is higher than what the Council extrapolates from the Pikitch study, then overall fishing mortality rates (catch mortality + discard mortality) may be at higher than sustainable levels. Continued, unseen overfishing will lead to stock declines, and may lead to stock collapses. When fish stocks are depleted, the fishing community suffers, because rebuilding depleted stocks requires the Council to lower directed harvest rates. Directed harvest rate reductions for 2000 were severe enough to warrant a Secretary of Commerce determination of a "commercial fishery failure due to a fishery resource disaster."

Under status quo, the standardized reporting methodologies used in the whiting fisheries would include the following programs:

At-Sea Whiting Fishery Observer Program. Since 1991, the domestic at-sea whiting processors have voluntarily carried NMFS-trained observers to provide data for estimating total landed catch and discards; monitoring the attainment of annual groundfish allocations; estimating catch rates of prohibited species; and assessing stock conditions. Under this voluntary system, vessel owners work directly with an observer contracting company of their choice that is certified for federal fisheries off Alaska and enter into private negotiations for observer services. In 1999, each processing vessel voluntarily carried at least one NMFS-trained observer while participating in the whiting fishery. Observer data is used by NMFS and the industry for inseason catch monitoring, by scientists for stock assessments of whiting and other groundfish, and by the industry to monitor and avoid areas of high bycatch while fishing, particularly to avoid salmon stocks. This program provides observer monitoring of 43% of the whiting hauls delivered to mothership processors, and 98% of the hauls of catcher-processors (NMFS, March 2000.)

Maintaining voluntary observer coverage in the domestic at-sea whiting fishery has been the result of shared efforts between the NMFS Northwest Region, the North Pacific Groundfish Observer Program (NPGOP), a division of the NMFS Alaska Fisheries Science Center, independent observer contractors, and the fishing industry. The Northwest Region monitors the fishery and interacts with the industry; the NPGOP provides for the pre-hire screening, field training, debriefing interviews, at-sea support, sampling equipment, and data management services; companies that are certified as observer contractors for the Alaskan program provide hiring and support services; and individual processing vessels pay the direct costs associated with carrying the observers.

For the most part, the at-sea whiting fishery has been satisfactorily managed as a voluntary program. However, NMFS's ability to ensure the integrity and availability of observer data in the future is constrained by the lack of regulatory requirements defining the needs of an observer program and mandatory coverage levels. Under the current voluntary observer system, there are no regulatory requirements defining the roles and responsibilities of observers, of observer contracting companies, or of industry vessels participating in an observer-covered fleet. Participants in the voluntary program use regulations pertaining to observer-covered fisheries in Alaska as guidelines for behavior, but the voluntary program hampers the agency's ability to respond to actions taken in the West Coast fleet that may be contrary to Alaska-based policies. The voluntary nature of the program also risks loss of data essential to a variety of scientific and management efforts, from inseason fishery monitoring to stock assessments of whiting and other species. For these reasons, NMFS presented a draft proposed rule to the Council in April 1999, in which the agency planned to propose making observer coverage of the at-sea whiting fleet mandatory. The Council took action to express its support for mandatory observer coverage of the at-sea whiting fleet, requiring at least one observer per vessel.

The proposed regulations drafted by NMFS and supported by the Council are moving forward and should be published in 2000. NMFS will continue to work toward mandatory observer coverage for the at-sea whiting fleet, and regulatory standards for all parties participating in the observer-covered fishery. During the process

of proposing and eventually codifying these observer regulations, the at-sea whiting industry has indicated its intent to continue with the voluntary observer program. NMFS anticipates that this program will continue to support the fishery's inseason management efforts as well as the inseason and post-season bycatch monitoring efforts.

At-Sea Whiting Fishery Logbook Program. This logbook program is also a voluntary program used in the at-sea whiting fleet to monitor catch rates inseason. Logbooks are used in conjunction with observers and provide real-time information to NMFS and to fleet participants for starting and ending the seasons for each sector of the at-sea fleet. Logbooks primarily serve to verify information collected by observers, and to fill in data gaps where observers were unable to collect information.

Under this voluntary program, catcher/processors maintain a Daily Fishing and Cumulative Production Log (DFCPL,) and motherships maintain a Daily Report of Fish Received and Cumulative Production Log (DRCPL.) These logs are identical, except that the DFCPL combines the production log with a fishing log, and the DRCPL combines the production log with a record of fish received from other vessels. Harvesting vessels delivering to processing vessels maintain the fishing log section of the DFCPL.

The daily fishing portion of the logbooks include: 1) vessel and gear specifications; 2) haul-by-haul information; 3) daily information on discards; and 4) information on daily vessel activity. Haul-by-haul information includes the date, time, location, sea depth, trawl depth, hail weight, duration of haul. Discard information logs Pacific whiting, other groundfish, and prohibited species (salmon, halibut, Dungeness crab) discards, with estimated daily discards of prohibited species recorded in numbers of individuals. All other species discard estimates are recorded by weight. Catch and effort information is used for inseason monitoring and for biological and economic evaluations of existing and proposed fishery management measures. Fishing log information is available to observers as it is recorded, and observers collect effort data and use other information in the logs to meet their data collection responsibilities.

Monterey Bay Halibut Set Gillnet Observer Program. This observer program covers the setnet fishery for California halibut and angel shark in Monterey Bay. Although the program is supported by Marine Mammal Protection Act (MMPA) funds and is designed to monitor marine mammal bycatch and bycatch mortality in this fishery, incidental groundfish bycatch and discard is also monitored. The objectives of this project are to: (1) observe a sufficient level of fishing effort to provide statistically reliable estimates of harbor porpoise mortality and serious injury; (2) record other target and non-target catch information (e.g., sea otter and seabird bycatch); (3) collect biological samples when possible (Enriquez (NMFS/SWR,) pers.comm.) This program was first implemented in 1999, with observation of 30% of the fishing days of all participating vessels.

Scientists at the Southwest Fisheries Science Center (SWFSC) will use data collected in this study, along with an estimate of annual set gillnet fishing effort provided through a cooperative agreement with CDFG, to estimate the annual incidental mortality and serious injury of harbor porpoises by the fishery. The results from this study will be used to determine whether the incidental take of central California harbor porpoise exceeds the stock's potential biological removal (PBR) level. If the new take estimates indicate PBR levels are being exceeded, NMFS may require the fishery to institute strategies to reduce the incidental take of harbor porpoise and may convene a take reduction team to help prepare a plan to reduce taking. This type of marine mammal bycatch monitoring is not required for the Pacific coast groundfish fisheries, because those fisheries are listed as Category III fisheries under the MMPA, meaning that annual mortality and serious injury to marine mammals in those fisheries is less than or equal to 1 percent of the PBR level of regional marine mammal stocks.

Shoreside Whiting Fishery Exempted Fishing Permits. For each year since 1992, NMFS has issued Experimental/Exempted Fishing Permits (EFPs) to whiting catcher vessels delivering to shorebased processing plants during the regular whiting season. The intent of the 1992 pilot EFP was to allow catcher vessels to bring their whiting catch to shore without having to sort and discard incidentally-caught salmon. A percentage of the participating vessels carried observers to monitor bycatch rates at sea, with catch offloading monitored by a separate contingent of shorebased observers. This EFP program was formalized in 1993 as an ongoing salmon bycatch monitoring program. Also in 1993, NMFS implemented regulations to prohibit or restrict fishing for whiting in times and areas where the whiting fleet was most likely to incidentally catch depleted salmon stocks.

In addition to allowing landings of incidentally-caught salmon, the 1993 EFP program introduced provisions to allow whiting catcher boats to land incidentally-caught groundfish in excess of groundfish landings limits. As with salmon bycatch, the bycatch of non-whiting groundfish was monitored when participating catcher vessels

offloaded their whiting catch to shorebased processing plants. Results from the 1992 through 1994 EFP programs indicated that salmon bycatch rates on observed and unobserved vessels were the same, and that those rates had been reduced through the time/area salmon conservation closures. The program was revised for 1995, shifting the monitoring focus from monitoring at-sea salmon bycatch to monitoring shoreside groundfish overages. Bycatch of salmon and other prohibited species continues to be monitored through the EFP program, but sampling efforts on incidentally caught groundfish have increased. In this program, 13% of the whiting shoreside landings are monitored by observers. This EFP program has continued, with occasional refinements, until today.

	1992	1993	1994	1995	1996	1997	1998	1999
Catcher vessels that actually delivered whiting to shoreside processing plants	29	25	33	34	39	40	38	36
Catcher vessels issued EFPs to deliver whiting to shoreside processing plants	18	21	31	35	40	45	38	50

In the early years of the EFP program, not all vessels delivering whiting to shoreside processing plants took advantage of the EFPs. By 1995, however, the number of EFPs issued was exceeding the number of vessels participating in the fishery. Vessel owners might apply for and receive EFPs in anticipation of participating in the whiting fishery, but then might decide to forego the whiting season for other opportunities and leave the issued EFP unused.

ODFW manages and monitors the shoreside observation program for the three states because the majority of whiting delivered to shoreside processing plants is landed in Oregon. During and after the season, ODFW tracks rates and quantities of prohibited species and non-whiting groundfish bycatch by vessel. In 1999, dockside observers monitored whiting deliveries in 7 ports, observing 10-30% of deliveries in those ports (Saelens, pers. comm.)

Alternative 2 (Mandatory logbook reporting of discarded catch). This alternative would include all of Alternative 1, plus the Council would either: (a) ask the three states (Washington, Oregon, California) to revise their logbooks to allow for reporting of total catch, instead of just retained catch, or (b) bring logbooks under federal authority, with required bycatch and discard reporting.

This alternative may not provide changes from the effect of Alternative 1, and would likely have an increased negative effect on the fishing community. As in Alternative 1, observer coverage in the at-sea whiting fleet would still become mandatory and dockside observer coverage would continue. Logbook reporting is controversial for two primary reasons: (1) without verification systems, fisheries scientists are generally skeptical about the accuracy of logbook reports, and (2) fishers are generally skeptical about whether and to what purpose the information they provide is used. Logbook reporting programs that are not compared with observer data for the same fishery cannot be tested for logbook verity, which means that information collected in such logbook programs may be unusable for bycatch and discard estimates. Historically, the most effective comparison agent for mandatory logbook requirements has been a simultaneous observer program, such as in the at-sea whiting fishery. A combined logbook/observer program relies on the observer program to provide a point of comparison for information collected on unobserved trips, and uses the logbook program to fill in observer program data gaps. Alternative 2 could result in the same stock depletions as those envisioned under Alternative 1, but it would have the added irritation for fishers of having to comply with a reporting burden that does not result in improved fishery information.

In the current state logbook reporting program, Washington, Oregon, and California require trawl vessels to maintain logbooks to record estimates of retained catch, catch location, and other basic information. Logbook records may be checked against fish tickets, which provide a more accurate accounting of landed catch. There are no state requirements to record discarded catch. Alternative 2 would require all vessels landing groundfish to report total catch, separated into retained and discarded categories. Under such a program, fish tickets could still provide a useful comparison for retained catch records. A major shortcoming of the current logbook program is that it depends on paper, rather than electronic reporting. Under a paper reporting system, the vessel operator fills out the paper logbook, which is then collected by the state of landing. The state of landing must then employ data entry personnel to enter logbook information into a computerized

database before that information can be used and compared with landings receipts or information from other vessels. An electronic logbook program would bring fishing data directly from the vessel to users in the scientific community, potentially improving the efficiency and useability of gathered data. As with any logbook system, an electronic logbook system should be coupled with observer coverage for comparison of data gathered on observed and unobserved fishing trips.

During the 1995 through 1998 fishing years, ODFW experimented with an enhanced logbook program that was designed to test supplementing information already collected in the state logbook programs (ODFW, 1997.) This Enhanced Data Collection Program (EDCP) was conducted in cooperation with the Washington Department of Fish and Wildlife, California Department of Fish and Game, and others to combine a collection of expanded logbook information with an observer program for West Coast groundfish non-whiting trawl fisheries.

EDCP goals included:

- Estimate trip limit induced discard rates for primary groundfish species
- Estimate discard rates for other groundfish species
- Estimate bycatch rates of prohibited species (salmon, Pacific halibut)
- Estimate Pacific halibut survival rate
- Allow salmon to be distributed to hunger-relief agencies
- Allow utilization of fish otherwise discarded

Trawl catcher vessels participated in this program on a voluntary basis, carrying observers and/or logbooks, as well as NMFS EFPs. Two types of EFPs were used in this program. A "Class A" EFP required the permit holder to collect discard information in an enhanced logbook while continuing to record landed catch, and allowed the vessel to retain prohibited salmon species for distribution to hunger relief agencies. A "Class B" EFP imposed the same responsibilities as the "Class A" permit, but included a requirement to carry an observer. EDCP observers monitored quantities and rates of discards, species composition of discards, halibut viability information, and conducted some biological sampling. A third class of permits planned for the EDCP would have required permit holders to retain all of the groundfish taken above groundfish cumulative landings limits (overages,) but no vessels volunteered for this permit class. The EDCP was a limited-duration project and data gathered has not been made available for Council or public use. NMFS is now assessing whether information collected under the EDCP could be useful to groundfish management.

Alternative 3 – Adopted (Implement observer program as soon as funding becomes available or with a requirement that vessels pay for observers.) This alternative includes all of Alternative 1, plus amends the FMP with general provisions for developing an observer coverage plan. Funding for the observer program would come from government or private sources, or a combination thereof. In April 2000, the Council endorsed a provision for a regulatory framework for a catcher vessel observer program in the groundfish fisheries. A list of technological supplements to this program could include, but not be limited to:

- *Electronic/paper logbooks with bycatch reporting*
- *Catch monitoring by camera*
- *VMS monitoring*

This alternative could have positive effects on the environment, and positive as well as negative effects on the fishing community. Alternative 3 amends the FMP with general provisions for an observer coverage plan under the regulatory framework for a future observer program for the shore-based groundfish fisheries. Depending on the funding mechanism, the cost of this alternative to participating vessels might be limited to providing food and bunk space to the observer. At its June meeting, the Council stated its interest in moving forward with an observer program, regardless of whether government funding could be secured for such a program. Although the Council's ultimate goal should be a healthy, appropriately-capitalized fishery where the average participant can afford full observer costs, that scenario does not apply to the current state of groundfish fisheries. This alternative would have the positive effect of finally providing real information about bycatch and discard rates in the non-whiting groundfish fisheries. This desperately needed information could be used in stock assessments and in setting harvest rates, to ensure that total fishing mortality is appropriate to stock abundance. Ultimately, improved fishing mortality information will have a cascade effect of giving fishery scientists and managers the tools they need to allow sustainable future groundfish harvests. Healthy fish stocks with sustainable harvest levels benefit fishing communities. On the other hand, some fishers believe that observers are an undesirable intrusion and might resent having to carry observers even if they are not paying for those observers.

Observer Program, Draft Observer Rules Framework, and Observer-Supplementing Technologies.
Observers are a uniformly trained group of scientists who gather independent data necessary for conservation and management of fisheries. They are stationed aboard vessels to observe fishing activities to gather data that is too burdensome for vessel personnel to collect, and which would otherwise not be available to fishery managers and scientists. Since the early 1990s, the Council has regarded at-sea observers as a viable means to collect much-needed data on at-sea discards. The GMT has continually stressed the need for an on-board observer program to accurately assess total catch.*

To address deficiencies in total catch data for catcher vessels, the Council proposed development of an on-board observer program at its April 1999 meeting. The Council created an Observer Program Implementation Committee to design a statistically sound sampling program, to be consistent with the Council's goals for a total catch data gathering program. The committee's June 1999 report to the Council included the following goals for an observer program:

- estimate total annual groundfish catch for all west coast fisheries that take groundfish
- estimate discard rates by species (for all species, including prohibited species)
- collect biological information on depressed species and on the primary species needed to define harvest populations for stock assessments
- establish a system for efficient collection, storage, and use of information

This committee met again in June and September 1999 to discuss program design, coverage strategies, data priorities, program infrastructure, and the supporting regulatory package. At the Council's September and November 1999 meetings, NMFS distributed early draft regulations designed to support observer placement in accordance with a statistically sound coverage plan, to permit observers to collect data according to scientific sampling protocols, and to promote observer safety. These regulations would not specify observer coverage requirements for individual vessels, but instead provide the regulatory support necessary to start up an observer program. At its April 2000 meeting, the Council adopted this regulatory package; Amendment 13 would give the Council the opportunity to add observer coverage plan language to the FMP.

To supplement an observer program, the Council may consider a simultaneous paper or electronic logbook program. Used with observer programs, logbooks can fill information gaps and confirm observer data. Logbooks are discussed above under Alternative 2. In addition to or as a substitute for logbooks, the Council might combine an observer program with camera catch monitoring or a vessel monitoring system (VMS.)

In the seamount sablefish fishery off British Columbia, Canadian fishers have been working with new video technology to test the use of cameras in lieu of human observers. Observer coverage is required in groundfish fisheries of British Columbia, and fishers are investigating ways to reduce the cost of carrying observers. The video-surveillance system tested in the sablefish longline fishery consists of a Global Positioning System (GPS) indicator, a camera positioned to view the fishing deck, and a battery/back-up power source to provide power to the camera system in case the vessel's electric system fails. An independent contractor (Archipelago Marine Research) provides the cameras, sets up the video surveillance systems on contracting vessels, collects the tape recordings of retrieved longline sets, and monitors the tapes once the vessel has returned to shore (McElderry, et al, 1999.)

Video surveillance systems connected to GPS indicators are useful in tracking catch by area fished, and new digital camera technology is improving resolution to provide some species-specific catch information. These systems may be more useful in fisheries that target particular species (like fixed gear sablefish fisheries), rather than in multi-species fisheries. Video observation is generally considered supplemental to an observer program, so that a fishery with less than 100% human observer coverage may be monitored by cameras when direct human observation is not available.

VMS uses GPS technology to track vessel locations for a variety of fishing fleets around the world. In the U.S., VMS is used in U.S. fisheries that are managed in part by areal restrictions. For example, in the Hawaiian pelagic longline fishery, VMS is used to monitor vessel locations to ensure that pelagic longliners are not fishing in areas that have been closed to longlining to protect Hawaiian monk seals and to prevent

*In a March 1991 statement to the Council, the GMT wrote, "The GMT has frequently expressed the need for an observer program in order to improve our management ability. Some of the gaps, in approximate order of priority, that could be filled by observer data are: (1) the magnitude of discarding for each species; (2) the sex and age composition of discarded fish; (3) the sex and age of fish dressed at sea (primarily sablefish); (4) tow-by-tow information on the species composition (especially rockfish) of the catch to be landed; and (5) the distribution of fishing effort by depth and area to verify logbook data."

gear conflicts with nearshore fisheries (implementing regulations at 50 CFR 660, Subpart C.) While VMS cannot by itself provide bycatch monitoring, it can allow fishery managers to enforce closed area regulations designed to reduce bycatch rates, and can provide information about where and when individual vessels fish for groundfish.

Alternative 4 (Implement observer program, with requirement that vessels pay for observers). Similar to Alternative 3, this alternative would include all of Alternative 1, plus allow the Council to amend the FMP to provide general provisions for developing an observer coverage plan. However, under this alternative, vessels would pay observer costs, while program and infrastructure costs would be borne by NMFS. A list of technological supplements to this program would include, but not be limited to:

- *Electronic/paper logbooks with bycatch reporting*
- *Catch monitoring by camera*
- *VMS monitoring*

This alternative would have positive effects on the environment and negative effects on the fishing community that would probably outweigh expected long-term benefits for the fishing community. As described above at Alternative 3, an observer program can provide invaluable information on catch and discard rates in the groundfish fisheries. In spite of the expected benefits to the environment, the Council has been reluctant to implement an observer program due to the cost of such a program to participating vessels. Groundfish harvest rates and trip limits have declined in recent years, with a particularly steep drop in 2000. Depending on method of estimation, revenues for the 2000 commercial groundfish fishery are expected to be $9 million to $11 million lower than in 1999. With this precipitous change, many vessel owners and captains are not able to hire a full complement of crew. Given an approximate observer cost of $300 per observed fishing day, the cost of a fisher-pays observer program might drive some fishery participants out of business.

4.3a Issue 3 -- Management Measures to Reduce Bycatch and Bycatch Mortality

Issue 3	environmental effects	socio-economic effects
Alternative 1	--	-- (long-term)
Alternative 2	+(potential)	+(potential)/-(potential)
Alternative 3	+(potential)	+(potential)/-(potential)
Alternative 4 (Adopted)	++	+(long-term)/ -(potential, near-term)

Alternative 1 (status quo - no action). Under this alternative, the Council would neither amend the FMP, nor take any further actions to reduce bycatch rates in the groundfish fisheries. In all likelihood, excess capacity in the groundfish fishery and consequent bycatch rates would be unaffected, and could increase.

This alternative would have negative effects on the environment and on the fishing community. The current management regime of trip and cumulative landings limits is based on the Council's desire to maintain a year round groundfish fishery. The priority of managing for a year round fishery is described in one of the overall goals of the FMP, and in one of the FMP's economic objectives:

> Goal -- Utilization. Achieve the maximum biological yield of the overall groundfish fishery, promote year-round availability of quality seafood to the consumer, and promote recreational fishing opportunities.
>
> Economic Objective. Identify those sectors of the groundfish fishery for which it is beneficial to promote year-round marketing opportunities and establish management policies that extend those sectors fishing and marketing opportunities as long as practicable during the fishing year.

Fishers and processors have historically used groundfish operations during times when fisheries for other species are closed. Alternatives to groundfish, such as salmon, crab, shrimp, and tuna, are shorter seasonal

fisheries. Fishing vessel owners rely on year round fishing opportunities to keep their vessels staffed with experienced captains and crew, and to keep markets open for their catch. Processing plants rely on receiving year round fish landings to keep their trained staff employed, and to keep marketing opportunities open for their products. If the vessels or plants must cease operation for a significant period, they will lose their trained workers and then need to hire and train new workers when the fishery reopens.

This management practice of using landings limits to maintain a year round fishery was reasonable and prudent when it was first used in 1983. However, since that time, the coastal fleet's fishing capacity has increased, stock viability for many managed species has decreased, and there are "too many boats chasing after too few fish." With overcapacity and lower overall harvest levels, cumulative period limits have also dropped. While low landings limits are needed to ensure both a year round fishery and sustainable harvest rates, they may also induce regulatory discards.

Alternative 1 is not expected to lead to a more biologically and economically stable fishery. The Council has enough experience with status quo management to predict where a continuation of current policies would lead in the future. Over time, these policies have resulted in unknown and possibly not sustainable discard rates, an overcapitalized fishery, ever-decreasing landings limits, and an economic "death by a thousand cuts" for many participating fishers and fishing communities. Bycatch is only one of several major and conjoining issues of concern before the Council. Council efforts to move beyond the status quo to address problems of bycatch will only complement its efforts in addressing other concerns in management of this fishery.

Alternative 2 (framework bycatch reduction goals). Under this alternative, the Council would amend the FMP to indicate its intent to deal with overfishing and overcapacity issues through its adoption and implementation of its strategic plan, and when taking measures to deal with those issues, choose management options likely to reduce bycatch. Capacity reduction appears to be the most promising avenue for rationalizing the fishery. However, implementing such a program would require a longer process than this plan amendment process. The Council will examine capacity reduction measures through its developing strategic plan.

This alternative could have positive effects on both the environment and on the fishing community, if the strategic plan results in changes to status quo management. As discussed above for Alternative 1, the major problems of the groundfish fishery are interwoven. Solutions to overfishing and overcapacity will also likely reduce bycatch and bycatch mortality. Under Alternative 2, the Council would specify in the FMP its intent to particularly address bycatch as it crafts management changes to deal with overfishing and overcapacity. These efforts should lead to more stable stock health and harvest rates, and to more economic stability for participating fishers. However, if Alternative 2 is chosen and measures are not taken to address overfishing and overcapacity, the effects of this alternative would be the same as those for Alternative 1.

Alternative 3 (framework bycatch reduction goals, plus add full retention options.) This alternative would include all of Alternative 2, plus it would allow: (a) full retention of incidental catch in the at-sea whiting fleet for those processing vessels that carry more than one observer, and (b) full retention of landings limits overages for appropriately monitored vessels (via on-board observers, camera catch recording, etc.) delivering to shorebased processing plants.

Depending on how it is implemented, this alternative could have either positive or negative effects for the environment and the fishing community. Allowing full retention in the at-sea whiting fishery would have positive effects for the environment and for the fishing communities associated with the at-sea whiting fishery. Alternative 3 could be expected to reduce bycatch in the at-sea whiting fishery, increase utilization of incidentally harvested species, and improve species-specific incidental catch information for that fishery. Because the non-whiting shore-based groundfish fisheries are managed with landings limits rather than as open competition fisheries, full-retention in these fisheries could have either positive or negative effects on the environment and the fishing community.

Full-retention option for offshore whiting processors. The at-sea processing component of the Pacific whiting fishery consists of catcher/processors, motherships (vessels that receive and process fish at sea but do not catch fish), and catcher vessels that deliver to motherships. Each at-sea processing vessel in the whiting fishery has carried at least one NMFS-trained observer since the beginning of operations in the whiting fishery in the early 1990's. In recent years, the catcher/processors and one of the motherships have carried two observers. Catcher/processors and catcher vessels delivering to motherships are subject to the same groundfish landings limits as the rest of the limited entry fleet. For species with landings limits, motherships are allowed to retain no more than the landings limit amount from each delivering catcher vessel.

Incidental catch rates in the offshore whiting fishery are generally low (less than 5 percent of total catch,) but the magnitude of the whiting fishery is so large that the tonnage of incidental catch may be considerable, particularly of yellowtail and widow rockfish. In order to comply with landings limit regulations, at-sea processors may need to discard substantial amounts of incidental species after a landing limit amount is reached.

At-sea whiting processors do not offload their catch as frequently as shore-based vessels. A catcher/processor or mothership may operate during a period that spans several cumulative landings limit periods, without offloading. These at-sea processors are not allowed to exceed the cumulative limit that applies for the period in which offloading occurs, which means that the vessel may not combine the cumulative landings limit amounts for more than one period. This puts the at-sea processors and catcher vessels delivering to motherships at greater risk of exceeding the cumulative limits, and can result in greater discards at sea than a shore-based vessel subject to the same limits. The offshore whiting fishery is not prohibited from retaining incidentally caught species within landings limit levels, but they generally neither target nor desire these species. Rockfish are spiny, get tangled in the nets, and damage the whiting. The offshore whiting fleet does not routinely process or sell incidentally-caught species, and those that are retained generally are made into fish meal. These conditions and the desire of industry to minimize regulatory discards, along with food bank interest in collecting bycatch for use in hunger programs, make the at-sea whiting fleet a viable candidate for a full-retention management option.

Under this alternative, if a catcher/processor or mothership in the whiting fishery carries more than one NMFS-approved observer for 90 percent of the days on the grounds during a cumulative trip limit period, then groundfish trip limits could be exceeded without penalty for that cumulative trip limit period. All species would be made available for sampling by the observers before sorting. Any trip limit overage could not enter or otherwise compete in normal markets for that species, and overages would either be: (1) converted to meal, mince, or oil products, which could then be sold, or (2) donated to an approved food bank distributor. This option would not apply to prohibited species (salmon, Pacific halibut, Dungeness crab.) If a vessel were to choose to deliver to a food bank distributor, provisions would be made such that state or federal enforcement representatives would have the opportunity to monitor any such offloading. The vessel could not receive compensation or otherwise benefit from any overage amounts unless the overage were converted to meal, mince or oil products.

The number of observers required for a vessel to participate in the overage program would be evaluated periodically, and changes generally would be announced concurrent with the annual specifications and management measures, and at least prior to the start of the fishery. In its first year, this provision would apply to an at-sea processor that carries at least 2 observers. In the future, a higher level of observer coverage might be needed on some high-capacity vessels. The number of days on the grounds would be determined from information routinely submitted by the observer onboard the vessel. A vessel would not be obliged to operate under this program. Some at-sea processing vessels could choose to continue to carry only one observer, the minimum amount recommended by the Council, in which case current trip limits would continue to apply as for the rest of the limited entry fleet.

To the extent that vessels choose to participate in this program, this full-retention option would eliminate regulatory discards in the offshore whiting fishery, give offshore fishery participants an incentive to carry more than one observer, and improve catch data without changing the rates of incidental catch in this fishery. Further, this program could provide fish for food banks, and the processed incidental catch would not compete in or affect pricing in traditional markets for food fish. Weaknesses of this option include: unprocessed fish may not be suitable for human consumption and processing costs for donated fish could be burdensome; the incentive to avoid incidental species would not change from incentives under status quo management; the program may require additional monitoring and enforcement at offloading. An additional concern is that competition with Alaska fisheries for qualified observers is increasing and may mean that few observers would be available for this fishery.

Full retention option for shore-based groundfish fisheries: Two full retention programs have been available to the shore-based groundfish fisheries: the shore-based whiting fishery EFPs, which allow whiting trawlers to land non-whiting trip limit overages to ease whiting deliveries; and an EFP option in ODFW's Enhanced Data Collection Project. Both of these programs are described more fully above in Section 4.2. The shore-based whiting EFP program allows catcher vessels targeting whiting to land unsorted catch directly with the shoreside processing plant. In whiting fisheries, rapid post-catch refrigeration is necessary to keep the whiting flesh from deteriorating. A full retention program was available under the EDCP, but no vessels volunteered to participate in this portion of the project, which would have allowed vessels carrying observers to retain any

groundfish taken above groundfish landings limits.

In 1998 and 1999, the Council explored allowing retention of trip limit overages in the non-whiting groundfish trawl fishery. Under traditional full retention management, everything that is caught is kept, catches are monitored by observers, and the fishery closes when harvest limits on particular species are met. When the Council initially reviewed an industry proposal to allow the retention of trip limit overages, the intent was to allow trawlers to choose whether, how much, and which species overages they would retain. Retained overages were to be landed at designated processors, and the proceeds from the sale of the overages were to go into a scientific research fund. Subsequent versions of this program would have set a cap on the amounts of overages that could be landed by each vessel and by the fleet, and considered deployment of observers.

An overage retention program must be monitored to provide information about directed and incidental catch. There are a number of other potential problems with an unmonitored overage retention program. A significant issue is that processors would profit from the sale of overages as processed product, which might give processors an incentive to bargain with fishers to target and land overages of regularly marketed species. Large and persistent overages by some fleet participants would have allocative effects on the whole fleet by reducing fleet-wide opportunities for compensated landings. If the program were to encourage fishers to change their fishing strategies from targeting landings limits to targeting overage limits, the overages retained plus the discard associated with the program could have actually increased the amount of discards. Finally, given the decline in harvestable biomass of managed species, this particular program was unlikely to generate enough revenue from the sale of landed overages to support new research programs. Although the Council endorsed a pilot version of this program at its April 1999 meeting, it has never been implemented due to Council workload priorities.

While the trip limit overages program discussed by the Council in 1998 and 1999 had several operational and scientific problems, a different kind of full retention program could reduce bycatch over the current landings limit program. Under such a program, vessels could retain all of the fish that they catch, and catch accounting would be monitored by human observers or by statistically sound observation technology. Observer data from such a program could provide much-needed information on species-to-species distribution ratios within species complexes, and on the catch ratios between marketable and unmarketable fish species and sizes. Overages landed under such a program could be brought to shore for donation to food bank programs. As an alternative to a full retention program, the Council could introduce an increased utilization program, wherein only marketable fish are retained, and unmarketable fish are discarded and recorded by observers as bycatch. Inseason harvest monitoring could take account of all species caught and adjust season lengths accordingly. In crafting such a program, the Council would have to weigh the advantage of freeing fishers from the restrictions of landings limits against the potential that such freedom could ultimately create derby fisheries and a new race for fish.

The Magnuson-Stevens Act defines "bycatch" as, "fish that are harvested in a fishery, but which are not sold or kept for personal use, and includes economic and regulatory discards." Full retention programs can reduce bycatch and can be enforceable when they require observer coverage for participants and prohibit at-sea discards. Without such precautions, allowing the retention of trip limit overages could not provide accurate information about the interception and retention of incidentally-caught species. Large and persistent overages by some fleet participants could also have allocative effects on the whole fleet by reducing fleet-wide opportunities for compensated landings. Conversely, observer data from a monitored full-retention program could provide much-needed information on species-to-species distribution ratios within species complexes, and of the catch ratios between marketable and unmarketable fish species and sizes.

Alternative 4 – Adopted (implement currently practicable changes to management measures). This alternative includes all of Alternative 3, allowing: (a) full retention of incidental catch in the at-sea whiting fleet for those processing vessels that carry more than one observer, and (b) full retention of landings limits overages for appropriately monitored vessels (via on-board observers, camera catch recording, etc.) delivering to shorebased processing plants. Additionally, this alternative would require implementation of management measure changes to reduce bycatch in the shore-based groundfish fisheries. Management measures that are not now practicable are described below at 4.3b. The list of management measures that could be implemented reasonably soon might include:

- *Shorter fishing season and higher cumulative landings limits*
- *Allow permit stacking in the limited entry fleet*
- *Gear modification requirements*

- *Catch allocation to, or gear flexibility for, gear types with lower bycatch rates*
- *Re-examine/improve species-to-species landings limit ratios*
- *Time/area closures (closed "hot spots")*

The effects that Alternative 4 would have on the environment and fishing community beyond those described above for Alternatives 2 and 3 would depend up on the additional management measures chosen. Those effects are described below within the discussion for each management measure strategy.

Shorter fishing season and higher trip limits. This management alternative could have a positive effect on the environment, and could have both positive and negative effects on the fishing community. Under this alternative to a year round groundfish fishery, the fishing season would be shortened in duration, perhaps to 6-8 months, and cumulative landings limits would increase. To the extent that higher landings limits and fewer cumulative limit periods would reduce opportunities to exceed landings limits, this alternative should reduce bycatch and discard mortality. For fishers who need to make groundfish landings during every month of the year, this alternative would be undesirable. For fishers who prefer access to higher limits as a trade-off for a year-round season, this alternative might be preferable to the current management strategy. The fish processing sector, often proponents of the year-round fishery, could benefit most from this alternative if there were flexibility for fishers in choosing their own open and closed periods. Under this alternative, higher trip limits could more closely match individual vessel capacity within the fleet, possibly reducing regulatory discards.

Over the past few years, the GMT has recommended on several occasions that the Council shorten the fishing season to allow for higher trip limits. The Council could arrange for a shorter fishing season in a variety of ways:

- Mandatory groundfish closure for all vessels during a specified period, applicable coastwide.

- Time/area closures, with groundfish landings prohibited for certain parts of the coast at differing times of the year (similar to the 2000 rockfish/lingcod closure for southern hook-and-line fisheries.)

- Divide the fishing year into quarters (or thirds, sixths, etc.) and require vessel owners to choose which 3 out of 4 fishing quarters they will participate in the groundfish fishery.

Under any of these options, the Council could set higher trip limits than are now available to groundfish fishery participants, which theoretically should reduce discards compared to those associated with the current low landings limits. The first two options would require that the Council work with the fishing industry to reach agreement on optimal times and/or areas for closure. Flexibility for closing times and areas could be built into the annual specifications and management measures process, as detailed under Issue 4 of this draft amendment. Alternatively, the Council could revise their management priorities and amend the FMP to shorten the year-round groundfish fishery.

The third option for a shorter fishing season, where participants would choose their times of operation would require amending the FMP and/or regulations to allow an annual season choice process. This process could be modeled on the current platoon choice system used by limited entry trawlers. Each autumn, when limited entry trawlers renew their permits for the coming year, they choose whether the renewed permit will be used in the "A" or "B" platoon. Once the permit owner has made his choice of platoon and NMFS has issued a renewed permit with platoon choice, that choice is fixed for the year. Using a similar once-per-year designation of season choice would ensure that each permit would only be used for the appropriate fraction of the year. Alternatively, the choice could be based on when landings are made, meaning that a vessel would declare its intent to fish in one of its allowed 3 out of 4 periods by simply making landings during that period.

Although higher trip limits combined with fishing closures could be expected to reduce bycatch and bycatch mortality, it might also become a "placeholder" regime that would itself eventually lead back to lower trip limits and increasing discard rates. A shortened fishing season with higher trip limits might not be a viable long-term management alternative without concurrent reduction in fleet capacity.

Permit Stacking. This management alternative has the potential for both positive and negative effects on the environment and fishing community. As discussed above, a management measure that allows vessels access to higher landings limits may reduce individual vessel opportunities to exceed those limits. Depending on how a permit stacking program is structured, however, such a program could achieve only absorption of latent capacity with no resultant reduction in bycatch and discard levels. Permit stacking unaccompanied by

an access limitation for the open access fleet could also squeeze capacity from the limited entry fleet into the open access fleet. Moving capacity from one fleet to another would fail to reduce the total number of vessels fishing toward, and potentially exceeding, cumulative landings limits. For limited entry fishers who want a way to receive compensation for moving out of the fishery, and for fishers with the capital to invest in permit stacking, this program would be a positive opportunity. For others without the ability to purchase another permit for stacking, this program would put them at a disadvantage relative to their wealthier counterparts. In permit stacking programs, the first permits purchased for stacking are generally unused or less-used permits, which means that accommodating the effects of fully-capitalized vessels buying up this latent capacity would likely require lower per permit landings limit levels than under the status quo.

The Council has discussed permit stacking on several different occasions since the implementation of the limited entry program. Currently, trip and cumulative limits are associated with individual vessels, so that each vessel has the opportunity to fish towards the species-specific limits appropriate to that vessel's limited entry permit gear and species endorsements. If changes were made to associate limits with permits and to allow permit stacking, vessel owners could stack permits to give themselves access to limits appropriate to individual vessel capacity. Where allowed landings levels more closely match vessel catch capability, vessels are less likely to need to make regulatory discards. A permit stacking program could not be expected to reduce economic discards. At its June 2000 meeting, the Council asked its staff to analyze a permit stacking program for fixed gear permits with sablefish endorsements, to be reviewed by the Council at its September and November 2000 meetings.

Vessel stacking provisions in a limited entry program may be designed with several variations:

- Permit stacking may be voluntary or mandatory. That is, permit owners may be allowed to purchase and stack additional permits if they so choose, or they may be required to stack permits to ensure that a pre-determined amount of capacity is absorbed through permit stacking.

- Permit stacking may be permanent or temporary. Once a permit has been stacked on to a base permit, the stacked permit may either become an inseparable part of the base permit, or "unstacking" may be allowed so that the stacked permit could be transferred to stack on to a different base permit or become a base permit itself.

- Stacked permits may have the same landings limit values as base permits, or some greater or lesser fractional value. Placing greater landings limit values on stacked permits than on base permits would encourage stacking. Placing lesser landings limit values on stacked permits than on base permits might benefit vessel owners who do not stack, in that it might constrain the drop in landings limits that would result from a stacking program.

In a voluntary program, limited entry permit holders would be allowed to use more than one permit on a single boat. A vessel owner participating in the limited entry fishery could be required to have a "base" permit with appropriate length and gear endorsements for that vessel, but could then be allowed to stack permits of any length to add to that vessel's allowable cumulative landings limits. The current sablefish allocation and management system would accommodate stacking between longline and pot permits, but not between trawl and nontrawl permits. While it is impossible to predict how many vessel owners would stack permits under a voluntary program, 53 people currently hold more than one of the 500 limited entry permits and stacking would be relatively simple for those people.

If stacking were mandatory, the Council could require vessels participating in the limited entry fishery to have at least two permits per vessel, thereby cutting the number of limited entry permits in half. Under a mandatory program, stacking might be made easier for participants if the stacked permit were not required to match the base permit in length. Stacking across gear types would have the same difficulties as in a voluntary program in that trawl/nontrawl stacking would not be compatible with the current sablefish management system. If stacking were required, allowing stacking between longline and pot endorsed permits would be helpful to the pot fleet, which now has a pool of just 27 pot permits and 5 dual gear endorsed permits in which pot is one of the gears.

If permit stacking is voluntary, the Council will have to decide whether a stacked permit must remain permanently stacked, or if it may be "unstacked," with the component permits distributed according to the permit owner's wishes. If permits are allowed to be unstacked, then the Council cannot ensure any long-term reduction in number of fleet participants. By allowing unstacking, stacked permits can be reduced to their component permits at any time and the number of fleet participants would continue to hover around 500.

Conversely, if permits must remain stacked, then a permit stacking program would essentially create a voluntary tiered permit system. Over the long-term, the stacked permits would allow higher tier landings throughout the fishing season and would have more value on the permit market.

Initially, a permit stacking program would encourage vessel owners capable of meeting and exceeding current landings limits to purchase less active permits. If only less active and inactive permits are purchased, permit stacking would reduce the number of vessels participating in the fisheries, but would allow overcapitalized vessels greater access to groundfish quotas. Base cumulative limit levels would have to be reduced to account for the increased access to quotas by vessels with stacked permits, placing vessels with single permits at a disadvantage relative to the rest of the fleet. Alternatively, the Council could craft a stacking program wherein a stacked permit would allow its owner some fraction of a cumulative limit, rather than another whole cumulative limit. For example, if each stacked permit provided the permit owner to harvest up to one-half of the base cumulative limit amount, a vessel with a base permit and a single stacked permit would have the opportunity to harvest one + one-half cumulative limits for a given species. Under this scenario, cumulative landings limits would remain higher for vessels without stacked permits, and more permits would be "bought out" by vessels wishing to target significantly higher cumulative landings limits. A third alternative would be to set the cumulative landings limit for stacked permits at some greater level than for base permits. Under such a scenario, a vessel with a base permit and a single stacked permit might have the opportunity to harvest a single cumulative limit with the base permit, plus one + one-half cumulative limits with the stacked permit. If the stacked permits are made greater in cumulative limit value than the base permits, the cumulative limits associated with the base permits will have to drop to prevent overharvest. Single permit owners would have the strongest incentive to stack under this scenario.

About 25% of the limited entry permits (124 permits) are currently owned by a person or corporation that owns more than one permit. Of those, 36 permits are owned by a person or corporation that owns more than two permits. If the Council decides to support a permit stacking program, one aspect of that program might be a limit on the number of permits that may be held by a single person or corporation, or a limit on the number of permits that may be stacked on a single vessel. For vessel owners who do not now own more than one permit, permit stacking could become expensive if they decide that they need to purchase a second or third permit. Alternatively, two or more permit owners could join together in a small corporation, in which a single stacked permit is owned cooperatively and shared between vessels as needed. This scenario could be allowed if the once-per-year permit transfer rule were eased to allow transfers only at the beginning of cumulative limit periods, but at any frequency per year desired by the permit holder.

Gear modification requirements. This management alternative could have a positive effect on the environment, but may have no effect whatsoever on the environment. To the extent that this management alternative would require fishers to invest in new gear, this management alternative could have minor negative effects on the fishing community. Gear regulations are usually designed to preclude particular fishing activities. Restrictions on or requirements for gear design must be crafted very carefully to achieve the desired changes to fishing activities. In general, fishers can find ways to engage in the particular fishing activity that regulators wish to control, while still complying with the gear regulations initially designed to control that activity. Given these circumstances, gear restrictions and requirements may not be the most effective management alternative for reducing bycatch and discard mortality.

As described above in the discussion of historical efforts to reduce bycatch, the Council has used gear modification requirements in the trawl sector to reduce interception of small and juvenile fish. Trawl gear mesh size requirements were first introduced into federal regulations in early 1992, but the Council was not able to work out implementation problems with those regulations until late 1995. Gear requirements must usually be very specifically worded to be enforceable, but that specificity of wording often leaves loopholes that allow fishers to get around the intent of the regulation without disobeying it. Trawl gear restrictions of the early 1990s were designed to reduce trawl interception of small and juvenile fish. Implementing regulations began with a change in mesh size requirements, followed by a requirement for single-walled codends, clarification of where and how chafing gear may be used on the trawl net, a distinction between trawl and pelagic trawl nets, and clarification of where and how mesh sizes would be measured to determine legality.

In 1999, the Council convened an ad-hoc Legal Gear Committee to look at trawl gear and determine whether there might be further gear regulations that could reduce bycatch rates in the groundfish trawl fishery. The committee reviewed current gear regulations and discussed a number of features of trawl gear that affect its catch of both retained and discarded catch: mesh size and type, meshes around the fishing circle, proportion/amount of net covered by chafing gear, sweep length, ground gear design, tickler chains, how much of the net is attached to the footrope, and other gear elements. In general, the committee felt that

mandating trawl gear modifications may not be the most effective means of reducing discard. Gear rigging and deployment likely has more effect on directed catch, bycatch, and escapement than the type of net being fished. The committee stated that it would be difficult to craft regulations to address the necessary intricacies of "tuning" the gear to reduce bycatch, and that fishers could possibly circumvent the intent of any regulation by changing the way in which the gear is fished. Committee conclusions on alternatives to gear regulations that could be better expected to reduce discard in the groundfish trawl fisheries included: reduce trawl fleet capacity to better match fishing capacity to available harvest; poll trawlers along length of coast for suggestions on discard reduction and share information between fleet members through education efforts; map habitat areas of overfished stocks under rebuilding plans and compare to mapped trawling areas to determine effectiveness of areal management. (PFMC LGC, April 1999)

Catch allocation to, or gear flexibility for, gear types with lower bycatch rates. This management alternative could have positive effects on the environment, and could have both positive and negative effects on the fishing community. By allocating harvest to gear types with lower bycatch rates, or by allowing flexibility for vessels to transition to gear with lower bycatch rates, this alternative could reduce the number of vessels with higher bycatch and discard rates. Catch allocation could be expected to have a negative effect on fishers using gear types targeted for reduced allocation. Allowing gear flexibility, however, would give fishers the chance to choose a more bycatch-clean gear type, benefiting the environment without harming fishery participants. Allowing gear flexibility could also change fishers' groundfish targeting strategies in ways that may or may not be compatible with the Council's management goals. The major impediments to this management alternative would be: (1) the lack of data on bycatch rates by gear type, and (2) if allocation is chosen, the long and arduous allocation process.

For the 2000 groundfish fisheries, the Council took emergency management measures to protect overfished and depleted species (lingcod, bocaccio, POP, canary rockfish, cowcod.) Among other measures, the Council recommended higher trawl trip limits for vessels using small footrope gear (less than 8" diameter) or mid-water trawl gear. These gear regulations were designed to keep trawlers from fishing rockpiles, where they would be more likely to intercept the overfished and depleted species. Differential trip limits for different gear types are a form of allocation. The Council may wish to consider whether it wants to make long-term allocations to gear types with lower bycatch rates.

The effectiveness of small footrope and mid-water trawl gear in avoiding overfished and depleted stocks has not been tested. Anecdotal information from trawlers who have fished under these regulations indicates that the requirements are keeping trawlers away from rockpiles, as intended. NMFS and/or the states need to test the bycatch difference between these gear types and between the different gear types used in the limited entry and open access fisheries. Without gear testing, discussions about bycatch and discard rates are likely to become accusatory and ineffective. However, if scientific studies can show lower bycatch rates in particular gear types, the Council might consider catch allocations to the more bycatch-clean gear types.

Alternatively, the Council could improve flexibility for vessels wishing to transition to more bycatch-clean gear. For several years, some members of the limited entry longline fleet have asserted that vertical hook-and-line gear is more selective than bottom longline gear, and that they would like to be able to take their landings limits with vertical hook-and-line gear. However, vertical hook-and-line gear is considered an open access gear type, and as such, cannot be used to fish up to the limited entry limits for targeted species. If vertical hook-and-line gear is more selective than bottom longline gear, then easing the restrictions on use of vertical gear might reduce discard rates in the longline fishery. Similarly, there have been limited entry trawlers who have come before the Council to suggest that they would like to fish their limited entry limits with longline gear. If bottom longline gear has lower bycatch and discard rates than trawl gear, flexibility for trawlers in switching between gear types might also achieve bycatch reductions. Of course, if the Council were to endorse such flexibility, it would need to be careful to not allow flexibility for vessels wishing to move from more bycatch-clean gear to less bycatch-clean gear.

Re-examine/improve species-to-species landings limit ratios within stock complexes. This management alternative would have positive effects on the environment, and could have short-term negative effects on the fishing community, but long-term positive effects if it helps rebuild the fisheries. The Council would set a priority for managing the multi-species fisheries with harvest ratios appropriate to natural abundance ratios. Making harvest rates more closely mirror natural abundance ratios could be expected to reduce bycatch by limiting opportunities for fishers to exceed the landing limit of one species while in pursuit of a second, associated species. To the extent that harvest of some species would be curtailed to prevent overfishing of co-occurring species, this management alternative could reduce fisher revenues. The major impediment to this management alternative would be the lack of information on species-to-species abundance ratios. One

caution with this alternative is that improved species-to-species ratio management will necessarily require more area-specific management as well. There would be no point to comparing abundance of POP off the Washington coast with abundance of bocaccio off southern California.

With an FMP that covers 82 species of fish, the Council has faced some particularly challenging questions about the appropriateness of single-species versus multi-species management. One of these challenges has been that the species-to-species ratio at which fish are caught does not necessarily reflect the species-to-species ratio of their abundance. For the DTS complex, Council management has evolved over time, moving away from its harvest strategy where shortspine thornyhead was harvested above its ABC so that the entire longspine thornyhead harvest guideline could be taken. Council practice is now more sustainable and shortspine thornyhead are harvested at their harvest guideline while some of the longspine thornyhead harvest guideline goes unharvested to protect the less abundant, co-occurring shortspine. The tool that the Council uses to maintain this balance is a ratio between shortspine and longspine thornyhead landings limits that is intended to reflect the ratio of abundance between these two species.

This practice of managing harvest through ratios appropriate to assumed abundance and catch rates minimizes dead discards of the less abundant species. Fishers are given a reduced opportunity to take the more abundant species (longspine,) so they are less likely to meet and exceed the landings limits for the less abundant species (shortspine.) Abundance information about many of the FMP species is rather limited. However, for actively managed species with species-specific harvest guidelines, the Council might consider whether it is managing those species at sustainable catch ratios. Regardless of whether the Council continues to manage the fishery with year-round landings limit opportunities, the health of all managed species would be better protected by a multi-species approach that considers abundance ratios between species that are harvested simultaneously. To properly implement a policy of harvest management through species-to-species ratios, the Council would need an analysis of which species could most benefit from such management, and a comparison between harvest ratios and assumed abundance ratios.

Time/area closures, such as closed "hot spots" to reduce bycatch of species with known areas of aggregation, or like the 2000 lingcod spawning closure. This management alternative could have positive effects on the environment, and depending on closure size, could be either an inconvenience for or have negative effects on the fishing community. If "hot spot" closures can be designed to encompass abundance areas for particular species, incidental harvest and mortality of those species will be reduced. Small "hot spot" closures, such as those for the Washington recreational halibut fishery, may be only an inconvenience for those who have to fish around the closures. Larger closed areas might limit harvest opportunity to a degree that negatively affects the fishing community.

In the sport fisheries for halibut off the coast of Washington State, there are two halibut "hot spots" that may be open or closed to sport halibut fishing, depending on the desired rate of fishing each year. These "hot spot" are zone of known halibut abundance, where halibut may be caught quite easily. When fishing outside a "hot spot" seems slow, halibut managers can open those waters to fishing to speed up the fishery and improve access to halibut. Conversely, if harvest rates outside the "hot spot" are high, managers can keep that spot closed to ensure that fishers do not take their halibut allocation quickly and close out the fishery early. A similar tool might be used for other species to reduce incidental interception rates

There may be other species besides halibut that have contained zones of high abundance. If the Council has particular species it wishes to protect from overharvest or from the effects of incidental catch and discard, it could close those areas to fishing. This approach would not be particularly useful for species that migrate a great deal, but it could provide targeted protection for the more sedentary species. Although salmon are hardly sedentary, the Council has used this closed area tool in the whiting trawl fishery to exclude whiting fishing in the Klamath River and Columbia River conservation zones. The Council also used time/area closures in its 2000 management measures to close lingcod fishing during the winter spawning and nesting months. These lingcod closures do not prohibit all fishing in lingcod nesting areas, so they do not necessarily provide protection against lingcod interception, but they do provide fisher an incentive to avoid areas of known lingcod abundance. Species-specific area closures would be more difficult to enforce than all-fishing closures designed to protect particular species.

4.3b Management Measures that May Reduce Bycatch and Bycatch Mortality, and which are Impracticable at this Time

Derby fisheries. This management alternative may be technically possible, but it is extraordinarily inconsistent with long-term Council management policies.

Under the landings limit program, each landings limit for each species is a target that fishers may meet, and which they often exceed. When a fisher exceeds that target, he must discard the remainder of his catch of that species. In a fishery with monthly landings limits for many species, a fisher may make regulatory discards every month. An alternative to the landings limit regime might be to throw open fishing opportunities for the entire annual harvest guidelines of a complex of species, such as the Dover sole-thornyheads-sablefish complex (DTS complex). After opening on a set date, the DTS complex fishery would remain open until the first of the four harvest guidelines within that complex had been achieved. The bycatch advantage of such a system would be that fishers could keep as much catch as they desire for the duration of the fishery. Regulatory discards associated with landings limits would not occur in a derby system. However, derbies might encourage targeting on the most valuable species within the complex and encourage discard of associated species to allocate hold space to the more valuable species. Depending on the species, derby management might result in economic discard rates equal to current regulatory discard rates. Derby fisheries could also increase bycatch of overfished and depleted species, because fishers would not have time or opportunity to fish selectively. A derby fishery for a larger complex of species, such as one of the rockfish complexes, would be even more difficult to manage for harvest rates that are sustainable for all species in the complex without leaving great quantities of fish "on the table."

Derby management would run contrary to long-standing Council preferences for spreading groundfish landings out for as long as possible during the year. Traditionally, open competition derby management has also been viewed as encouraging individual fishery participants to increase the fishing capabilities of their vessels. With all fishery participants encouraged by open competition derby management to increase their individual vessel capacities so as to better compete against other fishers, the overall fleet capacity can skyrocket. The Council has a very vivid example of both the capitalization and decreased safety effects of derby management in its fixed gear sablefish fishery, which went from 9 months in duration to 5 days in duration over a 10 year period. Derby fisheries can also reduce the quality of fish harvested because they promote fast, rather than careful, fishing methods. Lower quality product would reduce price per pound received by fishers and processors. Market glut from derbies also tends to keep prices low. Many fishers off this coast rely on opportunities to create the highest quality product from low-volume fisheries.

Individual Quota Programs. This management alternative is impracticable because new individual fishing quota programs are currently prohibited by the Magnuson-Stevens Act until October 2000 and individual effort quota programs are not compatible with characteristics of a multi-species, multi-gear fishery.

An individual quota program, whether individual fishing quota (IFQ) or individual effort quota (IEQ,) is a management tool that can give fleet participants the time and opportunity to fully harvest their assigned quotas without landings limits or time limits. Under an IFQ program, each fleet participant holds an individualized number of quota shares per year and is permitted to fish toward the total poundage represented by those shares during the year. Generally, quota shares may be traded during the year to ensure that vessel owners either have enough allowable quota shares to cover the fish that they have caught, or to ensure that vessel owners who cannot catch enough fish to meet their quota shares may provide those excess shares to other fleet participants. In general, IFQ programs are expected to reduce or restrain fleet capacity by eliminating the race for fish. Vessel owners do not have to continually upgrade the speed and catching capacity of their vessels to compete with other fleet participants. Individual vessel capacity levels out when the vessel is fully capable of catching its associated quota shares.

IFQ programs may reduce discard because quota share holders can take their allowed fish at any time during the year, without the constraint of landings limits. An IFQ program would also assuage the Council's concern about maintaining a year round fishery. Under the current system, fishers deliver their catch according to the cumulative limit period schedule. With the more open schedule of an IFQ program, fishers can schedule deliveries with processors so that both parties can take better advantage of marketing opportunities.

IFQ programs have a bycatch hazard, highgrading. When fishers have more time to take their harvest, they can pick and choose which of the caught fish they will retain and fish are discarded for economic reasons. For example, fishers targeting sablefish may catch and dress small sablefish in the early part of a fishing trip, but later discard those small sablefish when the following hauls bring up an abundance of the larger, high-value sablefish. Thus, while regulatory discards would likely be reduced under an IFQ program, there would still be opportunities for economic discards. An IFQ program could also be combined with full-retention and observer requirements for landing quota species.

An IEQ program focuses on fishing effort expended (input control,) rather than on fish landed (output control.) Examples of tradeable effort quota programs might include limits on the number of pots or hooks fished, or

limits on the number of allowed fishing days or weeks. Effort limitation programs have been used successfully in crustacean pot fisheries, where a fishery participant is limited to a certain number of pots and all pots must conform to a standardized design. A pots-per-participant limitation program may be expanded to an IEQ program simply by allowing trading of pot allowances. In the groundfish fishery, an IEQ program might be based on the number of days fished, where participants could trade fishing days with each other to fill out their fishing schedules according to their needs.

Building an IEQ program based on fishing days could resolve bycatch problems if fishers were allowed to keep any of their desirable catch. Highgrading might still occur, but regulatory discards would be limited. The disadvantage of an IEQ program for the groundfish fishery is that it would not allow controls on individual species harvests. With the highly varied mix of species in the groundfish complex, an IEQ program could easily lead to overharvest of some of the minor species. Minor species harvest might be controlled in an IEQ fishery through landings limits for those species, but we would then find ourselves returned to our current management system. A fishing days IEQ program also would not control capacity, because it would give fishers the incentive to get the most out of each fishing day through vessel improvements and other capacity increasing measures.

Regardless of the efficacy of IFQ programs at reducing bycatch, development of any individual quota programs is under Magnuson-Stevens Act moratorium until October 1, 2000. Should the Council decide after October 2000 to develop an IFQ program, it will need to consider whether there are any sectors of the groundfish fishery that would be more appropriately monitored through an IFQ program. The Council must address bycatch in the groundfish fisheries regardless of whether individual quota programs are an available management tool. If the Council believes that an individual quota program is a desirable future management option, it could begin its work to address bycatch by using other management tools now, and then draft an individual quota program when that tool becomes available.

Capacity reduction through reduced fleet size. This management alternative is currently impracticable because implementation would require Council discussion and exploration beyond the scope of this draft amendment. Capacity reduction measures are under discussion for implementation following the adoption of the strategic plan and could ultimately be the result of any of Alternatives 2-4 under Section 4.3.

Overcapacity in the groundfish fishery is at the base of many other problems in the fishery. Reducing capacity within a fishery is a form of social engineering and as such, is bound to be controversial. When the Council first designed its limited entry program, it dealt with controversiality by setting a fairly low threshold for initial issuance of limited entry permits. Low threshold qualification requirements meant that the program could not reduce capacity to a level compatible with available harvest. Retaining an open access sector to allow continued participation by small harvesters, and to ease controversiality further compounded the fishery's overcapacity problem by leaving room for an unlimited number of new entrants. If the Council wishes to retain its policy of year-round landings limit management, it will need to reduce fleet size to reduce bycatch. Each cumulative limit period, there may be up to 2,000 vessels working to meet landings limits, and often exceeding them. Reducing the number of vessels targeting and exceeding landings limits is one way to reduce discard.

In 1997 and 1998, the Council discussed how and whether to develop a buyback program for the limited entry trawl fleet. Permit buyback is a socially "soft" management option that allows fleet participants to exit the fishery with some financial compensation. While there was agreement within the Council that reduction of trawl fleet capacity would be desirable for addressing myriad problems in the fishery, buyback discussions stalled because of delays in NMFS guidance on requirements for crafting buyback programs, and because the Council was reluctant to deal with the controversial necessity of allocating groundfish between gear groups before setting up a "taxation" program to pay for the trawl buyback. Unfortunately, the buyback program that the Council contemplated just two years ago is now an impossibility under current harvest levels. If the trawl fleet were to borrow money from the federal government to start up a buyback program, it could not repay that loan under current and expected future harvest conditions.

During buyback discussions and the simultaneous development of Amendment 11 to the FMP, the Council recognized that it might have to allocate certain groundfish species between different sectors of the fishery to better craft rebuilding measures for those stocks. At the Council's request, NMFS published a notice of control date of April 9, 1998, as the date after which groundfish landings in the limited entry fishery and in the recreational fisheries would not be considered during discussions for either allocation between commercial and recreational fisheries or for further access limitation programs in the limited entry fishery (63 FR 53636, October 6, 1998.) The Council later decided that it might also need to consider access limitation for the open access fishery. NMFS published a notice of control date of November 5, 1999 to announce that landings

made after that date in the open access fishery would not be considered by the Council in any future deliberations on access limitation programs for that fishery sector (65 FR 6577, February 10, 2000.) Thus, the Council has served notice of its intent to reduce fleet size in the commercial fisheries and to possibly constrain harvest in the recreational fisheries. These notices of control dates will be more effective if the Council acts swiftly on the programs contemplated.

In 1999, the Council hired an outside facilitator to bring the Council through a strategic planning process that would coalesce the problems of the groundfish fishery, and foster collective brainstorming on solutions to those problems. At the September 1999 Council meeting, the consultant engaged the Council, the GMT, the Groundfish Advisory Subpanel (GAP,) the Scientific and Statistical Committee (SSC,) the Habitat Steering Group (HSG,) and the Enforcement Consultants (EC) in discussions about major issues in groundfish fishery management. The consultant, Debra Nudelman of RESOLVE, Inc., reported on these discussions at the Council's November 1999 meeting. In her report, overcapacity was cited as the biggest challenge facing effective groundfish management.

Fleet reduction may be the most effective way to deal with overcapacity, but developing and implementing policies to do so would certainly be difficult and controversial. While limiting controversiality would help to smooth the transition from open access and open competition fisheries, the Council will need to consider whether to make difficult choices in the present or to face further fleet reduction needs in the future. If the Council takes the route of a less controversial access limitation program, it may wish to consider building buyback mechanisms into those programs at the start.

Incentives for vessels with lower bycatch rates, such as higher landings limits or fishing in certain areas (requires observer verification) This management alternative is impracticable without an observer program.

Vessel incentives to reduce bycatch is not a stand-alone management option. However, it does offer some interesting possibilities for encouraging the entire fleet to reduce bycatch rates. If the Council were to institute an observer program, it could monitor individual vessel bycatch rates, rank those vessels by degree of "clean" or "dirty" fishing, and then reward the cleanest fishers with further harvest opportunities. For example, if there were an observer program in the 2000 groundfish fisheries, vessel bycatch rankings could be tallied at the end of 2000. Also at the end of 2000, the Council could reserve 10% of managed species 2001 harvest guidelines for the top 10% of bycatch-clean vessels in the fishery. In 2001, the top bycatch-clean vessels of 2000 would have the opportunity to fish against the 10% reserve. Alternatively, the Council could reserve fishing opportunities in certain areas for only those vessels with the cleanest bycatch records.

Discard caps -- entire fishery closes when discard cap of particular species is achieved. This management alternative is impracticable without an observer program.

A discard cap is designed to protect a particular species within a fish complex, such as halibut bycatch caps in the Alaskan trawl fisheries. If the Council wished to target bycatch protection for a particular species within the groundfish complex, it could set a level of acceptable bycatch/discard for that species, after which all groundfish fishing would close. Over the past several years, the Council has had a policy of building assumed discards into total catch levels for many managed species. This practice is somewhat the reverse of the discard cap, which subtracts discards inseason. The advantage of managing with discard caps is that they draw a firm line beyond which no more of a particular species will be taken. Disadvantages of discard cap management are that they are more effective for protecting single species than for managing entire complexes, and that they tend to constrain entire fishing fleets for what may be the dirty fishing practices of just a few vessels. There are no individual vessel incentives to fish cleanly, just to fish as quickly as possible. Ironically, encouraging vessels to fish quickly so that they may take as much of the target harvest before the fleet reaches its discard cap may actually result in an increase in overall fleet discard rates.

Complete closures (marine reserves) for areas of interception of species designated for protection. This management alternative is currently impracticable because implementation would require Council discussion and exploration beyond the scope of this draft amendment. Marine reserve design and potential siting is now under discussion by the Council's Marine Reserves Committee.

Designating marine reserves to protect particular species or habitat would differ from closing "hot spots" in that the associated fishing closures would be permanent. In 1999, the Council convened a Marine Reserves Committee (MRC) to determine whether marine reserves might be a useful management tool for groundfish management. Thus far, the MRC has recommended that if the Council decides to use marine reserves, the design of those reserves should focus first on the protection of overfished species. Marine reserves are a

rather simple tool -- if no fishing occurs in a particular area, then directed and incidental harvest cannot occur in that area. It is doubtful that marine reserves alone can protect against overfishing or mitigate bycatch problems, unless the reserves in question are large enough to encompass the entire habitat of a particular species or species group. However, marine reserves can be used as insurance against overharvest or high rates of incidental catch by banking a certain portion of managed species population in unfished waters.

4.4 Issue 4 -- Annual Management Measures Framework Provisions

Issue 4	environmental effects	socio-economic effects
Alternative 1	-	--
Alternative 2	+/-	+/-
Alternative 3 (Adopted)	+	+/-

Alternative 1 (status quo - no action). Under this alternative, the current list of frameworked "routine" management measures would not change. The Council asked NMFS to use its emergency management authority to take management actions outside of the routine measures framework for 2000. Emergency measures are viable for six months, and may be renewed for the second half of 2000. However, emergency regulatory measures may not be renewed more than once, which would mean that, for 2001 and beyond, the status quo option would leave the Council with only the frameworked routine management measures that were available for the 1999 fishery.

This alternative would have negative effects on both the environment and the fishing community. The emergency measures that the Council recommended for the 2000 fishing season provided management flexibility designed to protect overfished and depleted stocks while also allowing the harvest of healthy stocks. Without this flexibility, the Council's current routine management measures provide only a blunt instrument to perform an intricate task.

The Council is required by the Magnuson-Stevens Act to rebuild overfished species. By November 1999, three groundfish species had been declared overfished (lingcod, bocaccio, POP) and two more species were expected to qualify as overfished (canary rockfish and cowcod.) Of these five species, all but POP are caught in both the commercial and recreational fisheries; POP is generally only caught in commercial trawl fisheries. Recreational fisheries occur mostly inside state waters and are primarily managed by the three states, in cooperation with the Council and NMFS to ensure the application of consistent regulations to groundfish fisheries both inside and outside of three nautical miles. Commercial groundfish fisheries are managed by a cooperative state-tribe-federal effort at the Council level, with Council recommendations then implemented as federal, state, and tribal regulations. This difference in management protocol for the two types of fisheries means that, in general, the Council is more able to control and curtail commercial fishing than recreational fishing.

Although there are no formal groundfish allocations between commercial and recreational fisheries, historic Council practice has been to estimate the amounts of managed species that would be taken in recreational fisheries, and to then manage the remainder for commercial fisheries harvest. Over time, the recreational fishery has expanded, but the overall amount of available groundfish harvest has declined. This practice has allocative effects that the Council cannot ignore. State participants in the Council process took significant steps to rein in the recreational fisheries in 1999, with new and lower bag limits for lingcod and rockfish.

For the 2000 fisheries, the Council recognized that the frameworked management measures for the recreational and commercial fisheries were not adequate to allow protection for overfished and depleted stocks. Each of the three states had agreed to craft measures with their recreational constituencies that would reduce harvest of overfished species. These proposed new recreational measures, particularly for California fisheries, were outside of the "routine" management measures. Further, the Council wished to prohibit commercial lingcod landings during lingcod spawning and nesting season, as well as provide differential trip limits for different commercial gear types. Both of these new commercial fisheries management measures were also outside of the "routine" management measures.

Under Alternative 1, the creative management measures in 2000 would not be available in 2001 and beyond. This alternative could have negative environmental effects, particularly for lingcod, because complete fishery closure during spawning and nesting season is an integral part of lingcod rebuilding efforts. Regardless of

which of the alternatives is chosen to address this issue, the Council will have to implement measures to rebuild overfished stocks. To achieve the same savings expected from the 2000 measures, the Council would have to dramatically lower the recreational fisheries bag limits and commercial fisheries landings limits. These harvest savings would come at a cost of negative socio-economic effects for both recreational and commercial fisheries. In other words, while this alternative may allow protection of overfished and depleted stocks, it would probably not allow fisheries access to healthy stocks. This alternative sacrifices flexibility in addressing the needs of overfished stocks and fishing communities for the convenience of not having to make changes to the FMP and implementing regulations.

Alternative 2 (amend federal groundfish regulations and the FMP to incorporate the emergency measures taken in 2000 as "routine" management measures -- listed at 6.2.1 in the FMP, and at §660.323(b) in the federal groundfish regulations.)

- *List of frameworked "routine" management measures for the commercial fisheries would include: limited entry cumulative landings limits that may be different based on type of gear used, and closed seasons for lingcod and rockfish.*

- *List of frameworked "routine" management measures for the recreational fisheries would include: size limits for canary rockfish, bocaccio, cabezon, kelp greenling, sculpin; closures for rockfish and lingcod; boat limits for cowcod; a requirement to keep the skin on rockfish; a prohibition on filleting cabezon; and hook limits.*

The purposes of this alternative would include: achieving the rebuilding plans, reducing bycatch, preventing overfishing, allowing the harvest of healthy stocks as much as possible while protecting and rebuilding overfished and depleted stocks, and equitably distributing the burdens of rebuilding among the sectors.

This alternative could have either positive or negative effects on both the environment and the fishing community. As described above under Alternative 1, measures taken for the 2000 fishery were intended to provide management flexibility to protect overfished and depleted stocks while still allowing harvest of healthy stocks. These measures were very specific, as is particularly illustrated in the above list of "routine" management measures for recreational fisheries.

As the Council addresses the needs of overfished and depleted species over time, it may wish to take different measures in 2001 and beyond than those measures it used for 2000. While this alternative would make the boundaries of Council authority very clear, it might not truly provide management flexibility. If the range of management measures available to the Council is expanded only to include those listed under Alternative 2, the Council may find itself at a loss if it needs to move outside of that list.

If the Council decides in the future that it needs to use management measures different from those on the "routine" management measures list and those listed under Alternative 2, it may not be able to adequately protect overfished and depleted species in the future. Additionally, restricting itself to the measures of Alternative 2 could have socio-economic effects similar to but less dramatic than those described above for Alternative 1. Again, the Council will continue to be obliged to rebuild and protect overfished species; it can best meet this requirement while providing flexibility on the socio-economic effect of this action if it broadens its list of available management tools.

Alternative 3 – Adopted (frameworking variation) Under this option, commercial and recreational management measures would become part of a framework for routine management measures.

- *List of frameworked "routine" management measures for the commercial fisheries includes: in cases where protection of an overfished or depleted stock is required, limited entry cumulative landings limits that may be different based on type of gear used, and closed seasons for any groundfish species.*

- *List of frameworked "routine" management measures for the recreational fisheries models the more broad framework for open access fisheries, so that all recreational fisheries for groundfish may be managed with bag limits, size limits, time/area closures, boat limits, hook limits, and dressing requirements.*

Further, this option amends Section 6.2 of the FMP so that the first time any new measure were used (first time for a size limit, for limits on a particular species, first time for a closed season, etc.,) it could only be

implemented during the two-meeting preseason process. Once adopted under an annual management measures cycle, the new measure could be adjusted as routine during the year. All routine management measures would continue to be established annually through the two-meeting preseason process, with adjustments to those measures allowable through the Council's meetings during the year.

The purposes of this alternative include: achieving the rebuilding plans, reducing bycatch, preventing overfishing, allowing the harvest of healthy stocks as much as possible while protecting and rebuilding overfished and depleted stocks, and equitably distributing the burdens of rebuilding among the sectors.

This alternative could have positive effects on the environment and both negative and positive effects on the fishing community. Clearly, Alternative 3 provides the most flexibility for the Council. Under this alternative, the Council could craft management measures targeted at protecting particular species, rather than having to take broad measures that limit all fishing to achieve that protection. With this flexibility, however, the way that management measures are crafted may result in a de facto allocation between commercial and recreational fisheries and between different gear groups. To provide long-term socio-economic stability in the fisheries, the Council should consider a more formalized allocation for the future.

As described above under Alternative 1, the result of Council action has been to give harvest priority to the recreational fishery, in part because recreational fisheries have historically taken the smaller portion of the available groundfish harvest. As the overall amount of harvestable groundfish has declined, the recreational fishery harvest has remained fairly constant, thereby increasing the percent of the whole taken in the recreational fisheries. In 1999, the Council lowered some of the recreational bag limits to try to reduce the amount of groundfish taken recreationally. While each individual recreational fisher may not take many fish, the cumulative effect on groundfish stocks of the many thousands of recreational fishers is significant. This same phenomenon happens on a smaller scale in the open access commercial fisheries, where many small-scale fishers were long accustomed to cumulative landings limits far above their catching ability. As the amount of groundfish available to the commercial fishery has dropped, hundreds of open access fishers have also begun to feel the pinch of smaller limits. Limited entry fishers, accustomed as they have become to limits inappropriate to their catching ability, are also understandably reluctant to give up their hold on a historical portion of groundfish landings.

Under this Alternative, the Council would have the flexibility to craft management measures that would annually distribute available harvest between commercial and recreational fisheries. Allocations between different sectors of the commercial fishery are more formalized, but there could be some allocative effects between gear groups under the flexibility of Alternative 3. If the Council selects Alternative 3 it will need to either annually assess and analyze the allocative effects of its annual management measures, or, in a future action, set more formal allocation goals and standards that it will follow each year in the annual management measures process.

4.5 Issue 5 -- Removing Limited Entry Permit Endorsements Other than "A" Endorsement (Housekeeping Measure)

Issue 3	environmental effects	socio-economic effects
Alternative 1	none	none
Alternative 2 (Adopted)	+ (minor)	none
Alternative 3	+ (minor)	none

Alternative 1 (status quo - no action). The FMP provides for four different gear endorsements, the "A" endorsement, the provisional "A" endorsement, the "B" endorsement, and the designated species "B" endorsement. Of those, only the "A" endorsement is currently in use.

This alternative is unlikely to have any effects on the environment or fishing community. However, under this alternative, all endorsements, including provisional "A" endorsements, would continue to be available. Most provisional "A" endorsements are obsolete, but one type of provisional "A" endorsement allows vessels that landed sufficient groundfish during the window period with a gear that has been subsequently prohibited by a state or the Secretary of Commerce to receive limited entry permits. Should a state or the Secretary of Commerce ban a particular gear at some future time, provisional "A" endorsements would still be available to the affected vessels under this alternative. If, in the future, new vessels are able to use the provisional "A"

endorsement, it could have the effect of introducing new fishing effort into an already overcapitalized fishery.

Neither retaining nor removing the "B" endorsement will have any effect on the environment, as that endorsement has expired and its removal would be a housekeeping measure. Retaining the designated species "B" endorsement under this option could only have the potential effect of allowing shortbelly rockfish harvest outside of the limited entry fishery. Shortbelly rockfish can be caught in association with other shelf rockfish, some of which species are or will be protected under rebuilding plans. If shortbelly rockfish were landed at their full harvest guideline, such fishing could have a negative effect on rebuilding plans for overfished and depleted species.

The activities described above in which this alternative would have a negative effect on the environment are unlikely to occur. Thus, retaining all three unused endorsements would have a negligible, if any, effect on the environment. The primary results of this alternative would be that it would require NMFS and Council staff to continue to waste time on outdated and unnecessary paperwork, and it would leave outdated material in the FMP and regulations, which could be confusing to the public.

Alternative 2 (remove all of the limited entry permit endorsements other than the "A" endorsement from FMP.) Under this alternative, the three unused gear endorsements (provisional "A," "B," and designated species "B") would be removed from the FMP.

This alternative is unlikely to have any effect on the environment or fishing community. As described above under Alternative 1, removing provisional "A" endorsements would remove obsolete materials and would remove the opportunity for new vessels to enter the limited entry fishery through provisional "A" qualifications. While removing this possibility would have the positive environmental effect of closing one avenue of limited entry capacity expansion, it could also have the negative social effect of denying fishery participation for a group of fishers who might have otherwise have been granted a permit. Given that the qualification window period was 1984-1988, the effects, if any, of removing this type of provisional "A" endorsement from the FMP should be minimal.

Neither retaining nor removing the "B" endorsement will have any effect on the environment, as that endorsement has expired and its removal would be a housekeeping measure. Removing the designated species "B" endorsement under this option would ensure that species associated with shortbelly rockfish would be protected from incidental catch, should a future fishery outside of the limited entry fishery develop for shortbelly rockfish.

Removing all three unused endorsements would have a negligible, if any, effect on the environment. The primary results of this alternative would be that it would save NMFS and Council staff time by removing a requirement for outdated and unnecessary paperwork, it would eliminate a possible avenue for future new entry into the limited entry fishery, and it would remove outdated material in the FMP and regulations, which could be confusing to the public.

Alternative 3 (remove "B" and designated species "B" endorsements, update provisional "A" endorsement.) Under this alternative, the provisional "A" endorsement would be updated so that it is only available in the future to vessels that used gear during the window period that is now prohibited by either a state or the federal government and with that gear, made sufficient landings to meet the minimum landing requirements for legal gears.

This alternative is unlikely to have any effect on the environment or fishing community. The expected positive environmental effects of removing "B" and designated species "B" endorsements are described above under Alternative 2. The expected positive environmental effects of removing provisional "A" endorsements is described above under Alternatives 1 and 2. Retaining one type of provisional "A" endorsements may have the positive social effect of allowing an avenue for future fishery participation for fishers who might have otherwise have been granted a permit. The designated species "B" endorsement is the endorsement that requires outdated and unnecessary annual paperwork, thus Alternative 3 would also save NMFS and Council staff time.

** None of the above alternatives would preclude the design of future gear or other permit endorsements, or of other access limitation programs.

BACKGROUND. Amendment 6 was adopted by the Council in 1991 to introduce a limited entry permit

program for the Pacific coast groundfish fishery. In order to smooth the controversial transition from an entirely open access fishery to the restrictions of limited entry, the Council recommended creation of four different permit endorsements to provide four different levels of fishery access. Only one of those permit endorsements is in use today, the "A" endorsement; this FMP amendment offers an opportunity for the Council to examine the necessity of keeping the other three endorsements in the FMP. Removing these endorsements from the FMP would save staff time for both the Council and NMFS, as staff currently must meet the annual regulatory requirements of maintaining these endorsements.

"A" Endorsements. All 499 current limited entry permits have "A" endorsements. "A" endorsements were originally intended for those vessel owners with a significant level of historical participation in and dependence on the fishery. When the limited entry program began, vessel owners qualified for "A" endorsements by ownership of vessels that met the minimum landing requirements (MLRs) during the window period, or that qualified for and upgraded a provisional "A" endorsement, or that were incorporated into the limited entry program under small fleet provisions.

Gear	Minimum Landing Requirement (for window period 7/11/84 through 8/1/88)
Trawl	At least 9 days in which over 500 lb of any groundfish species caught with groundfish trawl gear except Pacific whiting are landed or delivered, or 450 mt of landings or deliveries of any groundfish species caught with groundfish trawl gear except Pacific whiting, or 17 days in which over 500 lb of Pacific whiting caught with groundfish trawl gear are landed or delivered, or 3,750 mt of landings or deliveries of Pacific whiting caught with groundfish trawl gear.
Longline	At least 6 days in which over 500 lb of any groundfish species caught with longline gear are landed or delivered, or 37.5 mt of landings or deliveries of any groundfish species caught with longline gear.
Fishpot	At least 5 days in which over 500 lb of any groundfish species caught with fishpot gear are landed or delivered, or 150 mt of landings or deliveries of any groundfish species caught with fishpot gear.

"A" endorsements were designed to be long-term endorsements, integral to the permit, and transferable upon any transfer of the permit by sale, lease, or other agreement. By the time that the limited entry program was implemented for the 1994 fishing season, approximately 660 vessels had received limited entry permits. That number has been reduced over the 6-year life of the program through permit combinations by permit buyers.

Provisional "A" Endorsements. There are no current provisional "A" endorsement holders. Provisional "A" endorsements were developed for vessel owners who had purchased a vessel part way through the window period, or who had a vessel under construction or conversion during the window period. The provisional "A" endorsement required that, for the first three years after the new vessel purchase or after completion of the vessel upgrade, vessel owners meet minimum groundfish landings requirements. If in any of the years in the three year trial period the vessel did not meet the landings requirements, the provisional "A" endorsement permit would be terminated. Provisional "A" endorsement permits had a maximum duration of 3 years. However, if the landings requirements were met for all three years, the provisional "A" endorsement could be converted to an "A" endorsement. The annual minimum landings requirements for the provisional "A" endorsements were equal to the annualized MLR for vessels receiving "A" endorsements. Vessels with provisional "A" endorsement limited entry permits operated under the same management measures and specifications as the "A" endorsed limited entry fleet. Provisional "A" endorsement permits were not transferable.

When the limited entry program went into effect, three vessels qualified for and were issued provisional "A" endorsements. All three vessels met the annualized landing requirements and were issued "A" endorsements by 1997. NMFS has received no further applications for provisional "A" endorsed limited entry permits. Because of the passage of time, most types of provisional "A" endorsements are obsolete.

Provisional "A" endorsements have also been available to owners of vessels that landed sufficient groundfish during the window period, but that used a gear type that has been subsequently prohibited by a state (Washington, Oregon, or California) or the Secretary of Commerce. Use of this provision has never been triggered. However, the Council may wish to either retain provisional "A" endorsements altogether, or revise the qualifications for provisional "A" endorsements so that only vessels qualifying under this prohibited gear

provision would qualify for provisional "A" limited entry permits.

"B" Endorsements. "B" endorsements were developed to allow vessel owners who had participated in the fishery at a low level during the window period to continue in the fishery for a three-year adjustment period before being required to have an "A" endorsed limited entry permit for participation in the limited entry fishery. To qualify for a "B" endorsement, a vessel needed at least 500 lb of groundfish landings on at least three separate days at any time before August 1, 1988. The vessel owner had to have continuously owned the vessel since the date of the first of the three qualifying landings. "B" endorsements could not be upgraded to "A" endorsements, and permits with "B" endorsements were not transferable. Vessels with "B" endorsement limited entry permits operated under the same management measures and specifications as the "A" endorsed limited entry fleet.

Twenty vessels initially qualified for and received "B" endorsed limited entry permits. In accordance with the FMP, those permits and the "B" endorsement opportunity expired on December 31, 1996. Of those vessels initially issued "B" endorsements, two are now participating in the fishery with "A" endorsement permits. The "B" endorsement is now obsolete.

Designated Species "B" Endorsements. These endorsements were developed to allow domestic harvesters to particularly target species that were "underutilized." When Amendment 6 was approved, the three species designated as underutilized were Pacific whiting, shortbelly rockfish, and jack mackerel.

When the FMP was approved in 1982, Pacific coast domestic harvesters and processors did not have the capacity to fully utilize the harvestable surplus of all managed species. The Fishery Conservation and Management Act of 1976 provided for foreign fishing in U.S. waters for " . . . that portion of the optimum yield of [any] fishery which will not be harvested by vessels of the United States . . ." (201(d)) In its groundfish FMP, the Council divided groundfish species into two categories, those species that could not be discretely harvested without bycatch of other species, and those species that could be harvested with the expectation of minimal bycatch of other managed species. The FMP acknowledged that there were several species that were harvested at rates below maximum sustainable yield (MSY), but determined that most of those species could not be selectively harvested without bycatch of other species that were already fully utilized by domestic fisheries. Pacific whiting, sablefish, shortbelly rockfish, widow rockfish, and jack mackerel were categorized as harvestable without significant bycatch of other species, and therefore were subject to annual evaluations of domestic harvest needs and availability for foreign utilization.

By 1991, when the limited entry program was approved, only Pacific whiting, shortbelly rockfish, and jack mackerel were considered harvestable without significant bycatch and subject to evaluation of availability for foreign harvest and/or processing. Pacific whiting was fully used by the domestic fleet in 1991, and small joint venture processing levels were allowed for shortbelly rockfish and jack mackerel, as well as a small amount of directed foreign fishing for jack mackerel. From 1992 onward, all Council-managed species were considered fully utilized and there were no allocations to either the joint-venture processing interests or to directed foreign fishing.

The limited entry program and designated species "B" permits were implemented for the 1994 fishing year. Under the designated species "B" program, any Pacific whiting, shortbelly rockfish, and jack mackerel that would not be used by the limited entry fleet could be made available to vessels outside of the limited entry fleet by providing those vessels with designated species "B" endorsed permits. NMFS conducted annual surveys of the limited entry fleet to determine whether limited entry permit holders would fully use those species. After 1998, NMFS no longer surveyed the fleet about its Pacific whiting harvest, as that species was clearly fully utilized by the limited entry fleet. With the approval of Amendment 8 to the Coastal Pelagic Species FMP, jack mackerel was formally removed from the list of groundfish species managed under the groundfish FMP. Shortbelly rockfish are part of the shelf rockfish complex and as such, are associated with overfished and depleted species under the protection of rebuilding measures. Furthermore, since shortbelly rockfish are taken predominantly with trawl gear, there is little reason to expect future interest in harvesting shortbelly rockfish by vessels outside of the limited entry fleet.

NMFS has never issued any designated species "B" endorsed permits. NMFS has also never received any requests or applications for designated species "B" permits.

5.0 SUMMARY OF ENVIRONMENTAL IMPACTS, CONSISTENCY WITH THE FMP AND OTHER APPLICABLE LAW

An EA is required by the National Environmental Policy Act (NEPA) to determine whether the action considered will result in significant impact on the human environment. If the action is determined not to be significant based on an analysis of relevant considerations, the EA and resulting finding of no significant impact would be the final environmental documents required by NEPA. An environmental impact statement (EIS) need only be prepared for major federal actions significantly affecting the human environment. An EA must include a brief discussion of the need for the proposal, the alternatives considered, a list of document preparers, and the impacts of the alternatives on the human environment. The purpose and need for the proposed action was discussed in section 1.0 of this document, the management alternatives and the potential environmental and socio-economic effects of those alternatives were discussed in section 4.0, and the list of preparers is provided in section 8.0. Further discussions of biological and social effects of the actions that could be taken through Amendment 13 are provided below in discussions of the compatibility of draft Amendment 13 with the FMP and other applicable law, and in the Regulatory Impact Review (RIR.) In addition to testing a proposed action for compatibility with the laws discussed below, determining whether a proposed action will have a significant impact on the human environment requires testing against the following factors:

Table 2: NEPA Tests of Signficance

"Significant" Impact Factor	Draft Amendment 13 Proposed Actions
Beneficial and adverse effects of action	Expected beneficial and adverse effects of the proposed actions are discussed above in section 4.0. In general, draft Amendment 13 would provide beneficial effects for the environment while mitigating the potentially adverse economic effects of that protection.
Degree to which public health or safety is affected?	Proposed actions are not expected to adversely affect public health or safety.
Effects on unique characteristics of area?	Proposed actions are not expected to adversely affect unique characteristics of the managed area, such as historic or cultural resources, park lands, wetlands, or ecologically critical areas.
Degree to which effects are likely to be controversial?	Although proposed actions are not likely to be controversial with the broader public, some of the proposed actions may be controversial with fishery participants or the environmental community. Issues 1, 4, and 5 are unlikely to be controversial with either community. The action recommended on Issue 2, standardized reporting methodologies, represents a compromise between the positions of these two communities, and thus may be controversial. Action recommended on Issue 3, bycatch reduction measures, may be controversial depending on its implementation. Further actions to implement the programs that would be allowed under proposed action for this issue would be assessed for controversiality during their development.
Degree to which effects are highly uncertain or involve unknown risks?	Proposed actions are not expected to have significant effects on the environment that are highly uncertain or involve unknown risks.
Establishment of a precedent for future actions?	Proposed actions are not expected to establish precedents for future actions, or otherwise constrain future actions.
Individually insignificant but cumulatively significant impacts of action?	Proposed actions are not expected to have cumulatively significant adverse effects on the fishery or other related resource.
Adverse effects on historic, scientific or cultural resources?	No significant effects on historic, scientific, or cultural resources.

"Significant" Impact Factor	Draft Amendment 13 Proposed Actions
Degree to which endangered or threatened species or their habitat is affected?	No change in degree to which endangered or threatened species or their habitats are affected. See discussion below under Endangered Species Act.
Violation of a Federal, State, or local law for environmental protection?	Proposed actions are not expected to violate Federal, State, or local laws or requirements imposed for environmental protection.

5.1 Consistency with the FMP

An FMP amendment is designed in part to change some function or intent of the FMP, which means that the amendment may not necessarily be consistent with the existing FMP. However, the FMP contains several basic goals and objectives that provide guidance for the entire structure of the FMP and implementing measures. Issues 2 through 5, described above, are examined here for consistency with those goals and objectives. Both of the alternatives to address Issue 1, definition of the term “bycatch” are consistent with the FMP and would not change the intent or the implementation of the FMP.

The Council’s adopted alternative for Issue 2, standardized reporting methodologies, would provide the Council with much-needed incidental catch information. The FMP's first management goal concerns conservation, "Prevent overfishing by managing for appropriate harvest levels, and prevent any net loss of the habitat of living marine resources." Implementing an observer program would allow the Council and other managing entities to better quantify total catch and discards, providing a more accurate measure of fishing mortality rates. Further, under the FMP's Conservation Objectives, Objective 1 is to, "Maintain an information flow on the status of the fishery and the fishery resource which allows for informed management decisions as the fishery occurs." Information flows would be improved under the preferred alternative for Issue 2. Although the adopted alternative would be consistent with the FMP's conservation goals and objectives, it may conflict with Objective 15 under Social Factors, "When considering alternative management measures to resolve an issue, choose the measure that best accomplishes the change with the least disruption to fishing practices, marketing procedures, and environment." Bringing observers into the shorebased groundfish fleet would clearly be a disruption to fishing practices. In implementing an observer program, the Council will have to balance its information needs with measures to ease the implementation burden for fishers.

Under Issue 3, the adopted alternative would implement an increased utilization program in the at-sea whiting fisheries and allow future development of an increased utilization program in the shore-based groundfish fisheries, as well as several other possible future measures. As with Issue 2, increased utilization accompanied by appropriate monitoring would improve information flow. Increased utilization or retention of landings limit overages without monitoring would not improve information and could prove harmful to the resource, as discussed above in section 4.3a. These management changes would also meet Objective 11 under Utilization, "Strive to reduce the economic incentives and regulatory measures that lead to wastage of fish." The adopted alternative for Issue 3 would also allow future development of the following management measures: shorter fishing seasons and higher cumulative landings limits; permit stacking; gear modification requirements; catch allocation to, or gear flexibility for, gear types with lower bycatch rates; re-examination and improvement of species-to-species landings limit ratios; and, time/area closures. Of these, gear modification requirements, setting species-to-species landings limit ratios, and time/area closures are already allowed under the FMP and have already been determined as consistent with the goals and objectives of the FMP.

Setting a shorter fishing season could conflict with FMP Goal 3, Utilization, "Achieve the maximum biological yield of the overall groundfish fishery, promote year round availability of quality seafood to the consumer, and promote recreational fishing opportunities." If a shortened fishing season is not structured to allow different fishers and different fishing sectors to make landings at varying times of the year, the shortened season would not meet the goal of "promoting year round availability of quality seafood to the consumer." The Council has long interpreted this goal to mean that all fisheries except the whiting and fixed gear sablefish fisheries should be open to all fishers at all times of the year. This interpretation has kept the Council from exploring different ways of meeting that goal, such as allowing fishers to choose perhaps 8 months of desired fishing months per

year, scheduling those months around other non-groundfish fishing activities and non-fishing activities.

While permit stacking is not specifically prohibited in the FMP, the cumulative landings limit fisheries have traditionally been managed so that limit restrictions are applied per vessel rather than per permit. When the FMP was first implemented in 1983, there were no federal fisheries permits and the practice of applying limits to vessels was codified in the FMP's implementing regulations. Although permit stacking may not be inconsistent with the FMP, it would be a significant shift in the Council's historic management practices.

Catch allocation to, or gear flexibility for, gear types with lower bycatch rates would be consistent with Conservation Objective 2, "Adopt harvest specifications and management measures consistent with resource stewardship responsibilities, for each groundfish species or species group." Management measures to either allocate catch to gears with lower bycatch rates or to provide flexibility for more use of lower-bycatch gears would be supported under this objective. However, catch allocation in particular may be inconsistent with Social Objectives: "(13) When conservation actions are necessary to protect a stock or stock assemblage, attempt to develop management measures that will affect users equitably; and (14) Minimize gear conflicts among resource users." The Council has allocated harvestable resources between different user groups on several different occasions. Perhaps the most significant is the overall groundfish allocation between limited entry and open access fisheries, which was based historic landings levels for the gear groups within each category. Although historic landings levels are often used for fisheries allocations, the Council has used other criteria as the bases for its allocations. For example, the whiting shorebased/offshore allocation was based in part on social considerations and on a negotiated compromise between industry participants, rather than exclusively on historic participation. Providing gear flexibility to encourage fishers to use gear types with lower bycatch rates may be preferable to allocation as a way of meeting both conservation and social objectives.

For Issue 4, the adopted alternative would increase the FMP's flexibility for setting annual management measures. Over time, the FMP has evolved to allow the Council increasing flexibility with the annual management measure process, so new and further increases in flexibility would likely be consistent with this evolution. Allowing a flexible management framework is also generally consistent with the Council's historic emphasis on using management frameworks to provide flexible authority for a broad range of its customary activities. Nonetheless, when actions are taken under that more flexible authority, those actions must also be examined for their consistency with FMP goals and objectives.

Alternatives under Issue 5 that would amend the FMP to remove unused limited entry permit endorsements would essentially be FMP housekeeping measures. Although portions of FMP Section 14 would be removed by these alternatives, that removal would neither support nor run counter to the goals and objectives of the FMP. These unused endorsements may not be necessary in part because the Council has met its Utilization Objective 9, "Develop management measures and policies that foster and encourage full utilization (harvesting and processing) of the Pacific coast groundfish resources by domestic fisheries."

5.2 Magnuson-Stevens Fishery Conservation and Management Act

With respect to Issues 1-3, the purpose of Amendment 13 is to bring the FMP into compliance with Magnuson-Stevens Act requirements for standardized bycatch reporting methodologies and bycatch reduction requirements.

National Standard 9 for fishery conservation and management, at 16 U.S.C. 1851(a)(9), states that, "Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch."

At 16 U.S.C. 1853(a)(11), the Magnuson-Stevens Act requires that fishery management plans, "establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority -- (A) minimize bycatch; and (B) minimize the mortality of bycatch which cannot be avoided."

The adopted alternative for Issue 3, bycatch reduction measures, could be expected to minimize bycatch and bycatch mortality. Under the adopted alternative, a full-retention program for the at-sea whiting fishery could be implemented fairly quickly. The possible bycatch-reduction effects of this program and of the Alternative 4 sub-options are described above in section 4.3.

Each of the alternatives under Issue 2, including status quo, would in some degree address the Magnuson-Stevens Act standardized reporting methodology requirement. The effectiveness of each of these alternatives

is discussed above in section 4.2. The adopted alternative would amend the FMP to facilitate the set up a regulatory framework that the Council approved in April for an observer program aimed at collecting total catch data, including at-sea discards. The difficult question to ask concerning Alternative 3 is, "If an observer program is not required unless funding is made available, have Magnuson-Stevens Act requirements on standardize reporting methodology been met?"

West Coast groundfish fisheries are at a difficult juncture, and Council policies must meet a broad range of requirements, including the requirement to establish a standardized reporting methodology. The groundfish fisheries were recently declared a federal fishery failure. In considering how to deal with a fishery failure, the Council, NMFS, and Congress must craft long-term protection measures for depleted fish stocks. National Standard 1 states that, "Conservation and management measures shall prevent overfishing while achieving on a continuing basis, the optimum yield from each fishery for the United States fishing industry." Further, section 304(e) requires Councils and NMFS to rebuild overfished fish stocks, which inevitably means harvest cuts. Within the past two years, NMFS has designated five groundfish species as overfished and the Council has completed rebuilding plans for three of those species, with the fishery-reduction effects of those plans being felt coastwide. In addition to rebuilding requirements, scientific information available to the Council has improved in recent years and has indicated that historic harvest policies that had seemed sustainable and sometimes conservative, should now be considered too aggressive. Revising harvest policies to decrease fishing rates on healthy stocks will provide better future protection for those stocks, but will also strike another blow to the fishing fleets.

National Standard 8 provides protection to fishing communities: "Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks,) take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities." There are two components that need protection in a federal fishery failure, the depleted fish stocks and the fishing communities that have traditionally depended on those stocks. For fishing communities to survive and thrive, West Coast groundfish stocks must be healthy. Where fish stocks are not healthy, the Council must consider even more carefully the economic burdens created by its policies.

There are not enough individual fishers participating in the West Coast groundfish fisheries who can afford to carry observers to provide statistically sound sampling of fleet behavior. (NMFS, May 2000) Further, the Magnuson-Stevens Act does not allow the Council to disperse the economic effects of an observer program by funding the program through fleet-wide landings taxation. While a mandatory logbook program could meet the standardized reporting methodology requirement, the information provided through such a program would also not be considered statistically sound. Given the current economic condition of the fleet, meeting the standardized reporting methodology requirement in a manner that provides useable scientific information is essentially an unfunded mandate. Providing a regulatory framework for an observer program opens new avenues for the Council and NMFS to encourage funding that mandate for the West Coast groundfish fisheries. For these reasons, the Council's adopted alternative may be the best answer that the Council can give to the standardized reporting methodology requirement while still meeting other requirements of the Magnuson-Stevens Act.

With respect to Issue 4, the annual management measures framework provisions, each of the alternatives provides a certain level of flexibility in setting annual fishery management measures. As these measures are implemented on an annual basis, they are tested for compliance with the Magnuson-Stevens Act. The reason that the Council is considering this issue is so that it can have more flexibility in addressing requirements to protect and rebuild overfished and depleted species, while still taking into account the needs of fishing communities. Some of the measures taken in 2000 provide an example of how increased flexibility can allow protection of overfished and depleted stocks while also allowing fisheries access to healthy stocks. For example, several species have either very low or no landings limits allowed for vessels using bottom trawl, but targeting opportunities are provided for vessels using mid-water trawl gear. Several of the overfished species are more easily taken with bottom trawling gear, while mid-water trawl gear can be configured to target the more abundant species. The Council's adopted alternative is expected to give the Council flexibility to create management measures that balance the varied and sometimes conflicting mandates of the Magnuson-Stevens Act.

Issue 5 is a housekeeping measure in which the Council considers whether to remove outdated and unused limited entry permit endorsements other than the "A" endorsement. The "B" endorsement has expired and its removal has no relevancy to the Magnuson-Stevens Act. Removal of the designated species "B"

endorsement would acknowledge that the FMP manages no underutilized species. In particular, declaring shortbelly rockfish as fully utilized would provide protection to overfished species that may be caught incidentally to shortbelly rockfish harvest. If provisional "A" endorsements were retained, the FMP would provide some protection to vessels currently using open access gear that becomes subject to a future ban by a state (Washington, Oregon, California) or the Secretary of Commerce. Retaining provisional "A" endorsements might provide future insurance for fishing communities dependent on gear types under public scrutiny for harmful fishing effects, allowing users of those gear types to transition to limited entry gear. Alternatively, removing provisional "A" endorsements would eliminate a loophole for future entry into the limited entry fishery. Fishery effort expansion is addressed in part at National Standard 5, "Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose." In an overcapitalized fishery, management efforts generally tend toward restricting effort expansion, rather than allowing continued effort expansion flexibility.

Essential Fish Habitat (EFH) The Magnuson-Stevens Act requires that "each Federal agency shall consult with the Secretary of Commerce with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act." EFH is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." EFH for Pacific coast groundfish is further defined in Amendment 11 as "the entire EEZ and marine coastal waters inshore of the EEZ." NMFS guidelines (62 FR 66553, December 19, 1997) state that "adverse effects from fishing may include physical, chemical, or biological alternations of the substrate, and loss of, or injury to, benthic organisms, prey species and their habitat, and other components of the ecosystem. . ."

Only Issues 3 and 4 contain alternatives that may affect EFH. Under Issue 3, bycatch reduction measures, some of the sub-options for the adopted alternative could affect EFH. A shorter fishing season and higher cumulative landings limits could reduce the collective amount of time that vessels spend on the fishing grounds, which would result in fewer gear interceptions with habitat. Allowing permit stacking would either result in no change, or may reduce gear interceptions with habitat, depending on which permits are consolidated and on whether persons who sell their permits continue to fish. Gear modification requirements and catch allocations or gear flexibility to reduce bycatch may or may not reduce the effect of the fisheries on EFH, depending on the particular gear modifications required, or on the how the gear types with lower bycatch rates affect EFH as compared to other gear types. Re-examining species-to-species landings ratios would likely have no effect on EFH. Time/area closures to protect certain species from incidental interception would protect EFH from gear interception during times and in areas where fishing is closed.

Because Issue 4 deals with framework provisions, none of the alternatives are expected to have a direct effect on EFH. However, depending on how those frameworks are used on an annual basis, implementing measures may affect EFH. As with annual specifications and management measures for 2000, measures taken in 2001 and beyond will be assessed for effects on EFH when they are developed for public review.

5.3 Paperwork Reduction Act (PRA)

Under Issue 2, standardized reporting methodologies, the adopted alternative would contain collection-of-information burdens subject to the PRA. A description of information required would be submitted to the Office of Management and Budget (OMB) for review and approval. Under Alternative 2, vessels that do not currently carry logbooks (nontrawl commercial vessels and recreational vessels) might be required to use logbooks for retained and discarded catch reporting, and trawl vessels would be required to report new information. For either Alternatives 3 (adopted) or 4, vessels would be required to submit information that would be used to coordinate and conduct effective and efficient deployment of observers.

Under Issue 5, the housekeeping measure to remove unused limited entry permit endorsements, Alternatives 2 (adopted) and 3 would result in a reduction of collection-of-information burdens subject to the PRA. Each year, information is collected from the limited entry fleet to assess the amount of expected harvest of underutilized species. Either of these alternatives would eliminate this requirement and its consequent collection-of-information burden.

Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the PRA unless that collection of information displays a currently valid OMB Control Number.

5.4 Endangered Species Act

NMFS issued Biological Opinions under the ESA on August 10, 1990, November 26, 1991, August 28, 1992, September 27, 1993, May 14, 1996, and December 15, 1999 pertaining to the effects of the groundfish fishery on Sacramento River winter chinook, Snake River fall chinook, Snake River spring/summer chinook, Central Valley spring chinook, California coastal chinook, Puget Sound chinook, lower Columbia River chinook, upper Willamette River chinook, Upper Columbia River Spring chinook, Hood Canal summer run chum, Columbia River Chum, Central California coastal coho, Oregon coastal coho, Snake River sockeye, Ozette Lake sockeye, southern California steelhead, south-central California steelhead, central California coast steelhead, upper Columbia River steelhead, Snake River Basin steelhead, lower Columbia River steelhead, California Central Valley steelhead, upper Willamette River steelhead, middle Columbia River steelhead, Umpqua river cutthroat trout, and the southwest Washington/Columbia cutthroat trout. 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. Amendment 13 would not have effects that fall outside of the scope of effects considered in these Biological Opinions; therefore, additional consultations on these species are not required for this action.

None of the alternatives for any of the issues discussed above are expected to effect the incidental mortality levels of listed salmon species. It is reasonable to expect that adding new standardized reporting methodologies (Issue 2) would provide additional information on endangered species bycatch.

5.5 Marine Mammal Protection Act (MMPA)

Section 118 of the MMPA requires that NMFS publish, at least annually, a list of fisheries placing all U.S. commercial fisheries into one of three categories describing the level of incidental serious injury and mortality of marine mammals in each fishery. Definitions of the fishery classification criteria for Categories I, II, and III fisheries are found in the implementing regulations for section 118 of the MMPA (50 CFR part 229.) Pacific Coast groundfish fisheries are considered Category III fisheries, where the annual mortality and serious injury of a stock by the fishery is less than or equal to 1 percent of the PBR level.

Under the MMPA, marine mammals whose abundance falls below the optimum sustainable population level (usually regarded as 60% of carrying capacity or maximum population size) can be listed as “depleted”. Populations listed as threatened or endangered under the ESA are automatically depleted under the terms of the MMPA. Currently the Stellar sea lion population off Washington, Oregon, and California is listed as threatened under the ESA and the fur seal population is listed as depleted under the MMPA. Incidental takes of these species in the Pacific coast fisheries are well under their annual Potential Biological Removal (PBR) levels. None of the alternatives under any of the issues discussed above are likely to affect the incidental mortality levels of species protected under the MMPA.

5.6 Seabirds

Human activities affect seabirds through direct mortality from: 1) collisions with vessels, 2) entanglement with fishing gear, 3) entanglement with discarded plastics and other debris, and 4) shooting. Indirect effects include: 1) competition with fisheries for food, 2) alteration of the food web dynamics due to commercial and recreational removals, 3) disruption of avian feeding habits resulting from dependency on fish wastes, 4) fish-waste related increases in gull populations that prey of other bird species, and marine pollution and changes in water quality.

Seabirds are caught incidentally to all types of fishing operations, but the vulnerability of bird species to gear types differ with feeding ecology. Fishing gear used in the groundfish fishery includes trawl, hook-and-line, pot, and setnet. Hook-and-line gear occasionally catches surface-feeding seabirds that are attempting to capture bait as the line is being set; some birds are caught on hooks and drown. Trawl gear appears to catch surface-feeding and diving birds that are feeding and scavenging while the net is being hauled. Pot gear does not commonly catch birds, though rare reports of dead diving and surface-feeding birds exist in pot gear. Setnet gear, which is legal only in southern California waters, has documented effects on seabirds as well (Wohl, 1998.) None of the alternatives under any of the issues discussed above are likely to affect the incidental mortality of seabirds.

5.7 Coastal Zone Management Act

All of the adopted alternatives for each of the issues are consistent to the maximum extent practicable with applicable State coastal zone management programs. NMFS will correspond with the responsible state agencies under Section 307 of the Coastal Zone Management Act to obtain their concurrence in this finding.

5.8 Executive Orders 12866 and 13132

None of the proposed changes to the FMP would be a significant action according to E.O. 12866. This action will not have a cumulative effect on the economy of $100 million or more nor will it result in a major increase in costs to consumers, industries, government agencies, or geographical regions. No significant adverse impacts are anticipated on competition, employment, investments, productivity, innovation, or competitiveness of U.S.-based enterprises. (See RIR below at 6.1)

None of the proposed changes to the FMP would have federalism implications subject to E.O. 13132.

6.0 Regulatory Impact Review (RIR) and Small Business/Entity Issues Analysis

The purpose of an RIR is to determine whether any of the proposed actions could be considered "significant regulatory actions" according to E.O. 12866. This analysis has many aspects in common with an EA. Much of the information required for RIR analysis is provided above in the EA. The following table gives references for those required elements of RIR analysis that have already been addressed above. The Small Business/Entities Analysis addresses requirements of the Regulatory Flexibility Act.

Table 3: RIR Elements of Analysis

RIR Elements of Analysis	Corresponding Section in EA
Description of management objectives	3.3, 3.4, 4.0
Description of the fishery	3.2
Statement of the problem	1.0, 3.3, 3.4, 4.0
Description of each selected alternative	4.0

In addition to the information provided in the EA, above, a basic economic profile of the fisheries is provided annually in the Council's SAFE document.

6.1 Regulatory Impact Review (Elements Beyond Those Considered in the EA)

All of the key elements of an RIR have been fully considered in the EA, except for an economic analysis of the expected effects of each selected alternative relative to the status quo. Some discussion of the expected economic effects of the alternatives for each of the issues is provided above in Section 4.0. From that discussion, we know that only alternatives chosen for Issues 2, 3 and 4 could have potentially significant economic effects.

Issue 2: For Issue 2, standardized reporting methodologies, the expected socio-economic effects of implementing an observer program via a funding resource other than direct vessel payment for observers is fully analyzed in the EA/RIR/IRFA for "An Observer Program for Catcher Vessels in the Pacific Coast Groundfish Fishery" (NMFS, May 2000) Conclusions from that document are summarized as follows:

The costs to deploy observers under Issue 2, Alternative 3 (adopted,) consists of seven components: 1) logistical information, 2) liability insurance, 3) food and living accommodations on the vessel, 4) safety requirements, 5) a pre-trip meeting for observer and vessel owner/captain, 6) adequate sample space and time on the observed vessel, and 7) liability insurance. The total costs to the individual vessel and to the fleet would vary depending on the coverage strategy that was used, as would the number of vessels affected. The sum of these costs is estimated to range between $157 and $3334 ($11,044 if a vessel fished every day of the year) for the individual vessel and $113,040 and $193,086 for the fleet. The lowest costs to the individual vessel occurs when each observer samples only one limited entry vessel over an entire cumulative trip limit period and the highest cost to the individual vessel occurs when observers samples vessel trips at random and no vessel is sampled more than once. Conversely, the highest costs to the fleet occur under random sampling, and the lowest costs to the fleet occur when each observer samples only one limited entry vessel.

Among the vessels in the open access and limited entry groundfish fisheries that could be selected to carry an observer, there are substantial differences in terms of the annual ex-vessel value of their groundfish and total catch. Coastwide in 1999 (see below at Table 3,) approximately 9% of the limited entry trawl fleet, which includes the shore-based whiting vessels, had annual groundfish revenues less than $25,000 and 4% had annual total fishery revenues that were less than $25,000. This is compared to the limited entry fixed gear fleet in which 30% had annual groundfish revenues less than $25,000 and 15% had annual total fishery revenues that were less than $25,000. The open access fleet, which is comprised of many small vessels that have fewer and shorter trips, in which 97% had annual groundfish revenues less than $25,000 and 71% had annual total fishery revenues that were less than $25,000. It is expected that catch reduction in 2000 will lead to a large portion of the fleet having revenues less than $25,000 annually. With respect to the federal costs and workload increases, it is expected that the benefits of an on-board observer program would outweigh those increases.

Table 3: Percentage of Vessels in Revenue Categories, by Fishery/Gear Category and State, 1999 Groundfish (thousands of dollars)

	<$5	$5-$25	$25-50	$50-$100	$100-$200	>200
	Percent	Percent	Percent	Percent	Percent	Percent
WASHINGTON:						
Limited Entry						
Trawl	0	0	0	20	32	48
Non-trawl	5	18	33	42	2	0
Open Access	85	15	0	0	0	0
OREGON:						
Limited Entry						
Trawl	2	3	9	9	34	44
Non-trawl	3	7	37	36	17	0
Open Access	83	15	1	0	0	0
CALIFORNIA:						
Limited Entry						
Trawl	10	6	9	28	33	15
Non-trawl	24	26	24	18	6	1
Open Access	80	16	3	1	0	0
COASTWIDE:						
Limited Entry						
Trawl	5	4	8	18	33	32
Non-trawl	12	18	31	30	8	1
Open Access	81	16	2	1	0	0

Note: A vessel having a permit at any time during the year was treated as LE for the year. Any permitted vessel with a trawl endorsement was assigned to the LE trawl group. Only vessels that earned groundfish revenue during 1999 were included. Catch from vessels landed in multiple states was attributed to the state in which the groundfish revenue was greatest.

Table 4: Percentage of Vessels in Revenue Categories, by Fishery/Gear Category and State, 1999 All Species
(thousands of dollars)

	<$5	$5-$25	$25-50	$50-$100	$100-$200	>200
	Percent	Percent	Percent	Percent	Percent	Percent
WASHINGTON:						
Limited Entry						
Trawl	0	0	0	16	32	52
Non-trawl	2	15	30	48	5	0
Open Access	40	27	10	10	9	4
OREGON:						
Limited Entry						
Trawl	1	1	4	4	25	65
Non-trawl	0	0	12	17	37	34
Open Access	35	34	11	8	7	5
CALIFORNIA:						
Limited Entry						
Trawl	4	3	2	14	41	36
Non-trawl	5	18	24	35	14	4
Open Access	42	30	12	10	5	1
COASTWIDE:						
Limited Entry						
Trawl	2	2	3	10	33	51
Non-trawl	3	12	22	34	18	12
Open Access	40	31	12	10	6	3

Note: A vessel having a permit at any time during the year was treated as LE for the year. Any permitted vessel with a trawl endorsement was assigned to the LE trawl group. Only vessels that earned groundfish revenue during 1999 were included. Catch from vessels landed in multiple states was attributed to the state in which the groundfish revenue was greatest.

Issue 3: For the preferred alternative under Issue 3, the only measure that is developed enough to be implemented immediately following Council approval of Amendment 13 is the program for full retention of landings limit overages in the at-sea whiting fleet. All of the other sub-options under the preferred alternative will need further development and analysis before implementation. This would be a voluntary program, providing an incentive to those vessels that choose to carry more than observer in the form of modest revenue from fish meal. The revenue generated from selling fish meal from non-whiting incidental catch is expected to cover the cost of additional observers, making this program essentially revenue neutral for participants.

Catcher-processors now voluntarily carry two observers per vessel, while motherships generally carry one observer. Vessels participating in this voluntary overages retention program may be able to recoup the costs of the second observer through sale of fishmeal made from retained non-whiting groundfish and whiting viscera. The cost to at-sea processors of carrying an additional observer, at $250 per day for a 17-day season as occurred in 1999, would be $4,250 per vessel. Training and debriefing costs would require approximately $1,250 per vessel for the additional individual, bringing the per vessel total to approximately $5,500.

In 1999, the total of retained and discarded non-whiting groundfish for both catcher-processor and mothership sectors was 1142 mt, 94% of which was discarded. Product recovery rates for processed groundfish taken off Alaska provide a point of comparison for the expected fish meal product recovery rate from rockfish and other groundfish. At 50 CFR 679, Table 3, NMFS provides a 0.17 product recovery rate for fish meal from groundfish. Under this program, fish meal would be produced from incidentally-caught non-whiting groundfish and discarded whiting. In 1999, 985 mt of whiting was discarded, but that figure includes whiting processing waste as well as whole whiting of a size unsuitable for processing. Because observer data does not differentiate between whole discarded whiting and whiting waste, the fish meal product recovery rate could not be usefully applied to whiting discards. Thus, revenues realized from processing non-whiting groundfish into fish meal would be modestly supplemented by unquantifiable revenues from whiting discard and waste processed into fish meal.

At 1999 rates of 1142 mt of non-whiting retained and incidental catch, and a product recovery ratio of 0.17, approximately 194 mt of fish meal could have been produced for sale. Fish meal is usually exported for foreign markets, with prices per metric ton varying by importing country. Based on total exports, fish meal

prices in 1999 were about $590 per metric ton (NMFS FTI, 2000). Depending on where the fish meal generated by this program is sold, 194 mt of fish meal could be expected to generate about $114,460 for the fleet. Six catcher-processors and six motherships participated in the 1999 whiting fisheries, setting the expected per vessel revenue from this program at about $9,540. While observer costs per vessel are relatively fixed, revenue generated by this program would vary between vessels according to the rates at which they intercept non-whiting groundfish. On the whole, however, it appears that this program would cover the per vessel cost of carrying an additional observer without generating revenues high enough to give at-sea fleet participants an incentive to target non-whiting groundfish.

Vessels participating in this program would also have the option of donating non-whiting incidental catch to charitable organizations. If a vessel were to donate its non-whiting trip limit overages to food banks under this program, it would not recover the cost of the additional observer needed to participate. Some at-sea processing vessels also may not be equipped to process non-whiting groundfish into fillets and other useable forms, and food banks may be reluctant to accept donations of whole fish. In 1999, 99% (by volume) of the total groundfish catch of non-tribal motherships and catcher-processors was whiting. It may not be efficient for an at-sea processor to reserve on-board space and time to process 1% of its catch. However, vessels that participate in a food bank donation program likely have reasons other than efficiency for their participation.

Issue 4: For Issue 4, all of the alternatives, including status quo, will have some economic effect. Given that these alternatives are frameworking variations, it would be difficult to provide a quantitative assessment of the expected economic effects of each alternative. Nonetheless, some qualitative conclusions may be made about how the preferred alternative could affect the fisheries.

For the 2000 fisheries, the Council asked NMFS to take some emergency regulatory actions to allow more flexibility in the annual management measures process. In general, those emergency measures were needed because the status quo framework was not flexible enough for the Council to provide adequate protection for overfished and depleted species while also allowing fisheries access to healthy stocks. Even with this flexibility, some amounts of healthy stocks will not be fully harvested because their harvest will be constrained by regulations designed to protect co-occurring overfished species. Management measures to protect overfished and depleted species were drastic enough in 2000 to induce the governors of California, Oregon, and Washington to ask that the Secretary of Commerce declare the West Coast groundfish fishery a federal disaster. The management flexibility provided by the emergency measures allowed the Council to protect overfished and depleted species without also severely constraining fishing on healthy and abundant stocks.

The adopted alternative for Issue 4 would build annual management measures flexibility into the FMP for the purpose of providing protection to overfished and depleted species. This increased flexibility will allow the Council to craft management measures that protect stocks through fishery- and gear-specific regulations for both protected species and species that associate with protected species. Increased flexibility will also allow sustainable harvest of healthy stocks. In general, a future of more flexible management under the preferred alternative is expected to be more economically positive than under status quo.

Table 5: RIR Tests of "Significant Regulatory Actions"

E.O. 12866 test of "significant regulatory actions"	Issue 1	Issue 2	Issue 3	Issue 4	Issue 5
Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs or the environment, public health or safety, or State, local, or tribal governments or communities?	NO	NO	NO	NO	NO
Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency?	NO	NO	NO	NO	NO
Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof?	NO	NO	NO	NO	NO
Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in E.O. 12866?	NO	NO	NO	NO	NO

6.2 Small Business/Entity Issues

The Regulatory Flexibility Act (RFA) requires government agencies to assess the effects that various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those effects. A fish-harvesting business is considered a "small" business by the Small Business Administration (SBA) if it has annual receipts not in excess of $3.0 million. For related fish-processing businesses, a small business is one that employs 500 or fewer persons. For marinas and charter/party boats, a small business is one with annual receipts not in excess of $5.0 million. While there are some fishing vessels and processors operating in the West Coast groundfish fisheries that would not be considered small businesses, the vast majority of groundfish fishery participants are considered small businesses under SBA standards.

Under Amendment 13, many of the regulatory changes taken would be frameworking changes. Issue 1, definition of the term "bycatch," is expected to have no effect on small businesses. Issue 2, where the adopted alternative is for a framework to set up an observer program, has been discussed for its potential effects on small businesses at the EA/RIR/IRFA for an observer program for catcher vessels in the groundfish fishery (NMFS, May 2000.) The Council's adopted alternative under Issue 2 was chosen primarily because it has significantly lower potential negative economic effects than an observer program paid for by the fishing fleet,

Of the regulatory actions that could evolve from Amendment 13, the management change that could be adopted most quickly would be the increased utilization program for the at-sea whiting fishery described under Issue 3. This program would primarily affect catcher/processors and motherships, which do not qualify as small businesses. Additionally, the program is expected to have either neutral or slightly positive economic effects for participants (describe above at the RIR) and positive environmental effects. Because the whiting resource has been allocated between three different non-tribal sectors (catcher/processors, motherships receiving catcher boat deliveries, shorebased processing plants) providing increased flexibility for these large businesses is not expected to place small businesses in the whiting fishery (most catcher boats, some shoreside processing plants) at a disadvantage relative to the larger businesses.

As discussed above under Issue 3, the adopted alternative could also include a future program of increased utilization for the shore-based non-whiting groundfish trip limit fishery. This program would need analysis and development in the Council forum beyond Amendment 13, however it is worth noting here that such a program could have both positive and negative economic effects on small businesses. Although the structure of the increased utilization program would shape the effects of the program on small businesses, it is reasonable to expect that such a program would encourage vessels to exceed landings limits so that they could be assured of fully achieving those limits. Any landings limit overages would not provide revenue for the

catcher vessel, but would be deducted from that year's ABC for the species landed. The quantity of incidental catch would likely increase under this program because vessels would be targeting beyond landings limits rather than at landings limits, but unlike the current system, that incidental catch would be monitored and processed. Increased incidental catch monitoring is certainly better for the resource, but landed limit overages would have to be deducted from either assumed bycatch set-asides or from landed catch allocations, perhaps both. Higher incidental catch levels coupled with direct bycatch deduction from either bycatch set-asides and/or landed catch allocations would have the effect of the fishery as a whole using the available resources more quickly during the fishing year. Thus, one of the hazards of this program would be the potential effects on small businesses of a shortened fishing season without higher landings limits or a mid-year season closure.

In addition to the increased utilization programs proposed under Issue 3, the FMP could also be amended to allow: shorter fishing seasons and higher cumulative landings limits; permit stacking; gear modification requirements; catch allocation to, or gear flexibility for, gear types with lower bycatch rates; re-examination and improvement of species-to-species landings limit ratios; and, time/area closures. Potential economic effects of each of these management changes are discussed above in the EA at section 4.3. The Council has yet to work out details on these programs, so they will not be implemented at this time. If these programs are implemented at some later time, analysis specific to the design of the management changes would provide more detailed information on the economic effects of those changes on the fisheries.

Similarly, all of the alternatives for Issue 4 provide some measure of flexibility in the framework for the process to set annual management measures. The Council has been using this framework process for several years, and provides economic analysis during its development of annual management measures, and an EA/RIR for implementation of those measures. As discussed above in section 4.4, setting annual management measures is a balancing exercise in which the Council meets its requirements to protect overfished and depleted species, yet allows fishery access to healthy stocks. In general, increasing the flexibility in this framework process, as proposed under the preferred alternative for this issue, allows the Council to craft management measures that protect fish stocks while mitigating the economic effects of that protection.

Issue 5, which would remove unused limited entry permit endorsements from the FMP, would have no economic effect on small businesses. The adopted alternative would relieve a minor reporting requirement for limited entry vessels that annually reply to the NMFS survey on underutilized species.

Characteristics of the groundfish industry are provided above in Section 3.2. Details on fisheries contributions to the economic well-being of coastal communities is provided in the Council's draft "Community Descriptions" document. Further characterization of the degree to which groundfish fleet participants depend on groundfish resources and are affected by changes to groundfish regulations is provided in the following tables and figures. Distributions of participating vessels by revenue categories are provided above in Tables 3 and 4, above. Tables 6 and 7 show the number and percentage of West Coast groundfish vessels that are dependent on groundfish for a certain percentage of their total revenues from West Coast fish landings. The figures at the bottom of Table 7, show that limited entry trawlers rely most heavily on groundfish, at 59% of their total West Coast revenues being derived from groundfish, followed by limited entry nontrawl vessels at 49%, and open access vessels at 35%. Figures 1 and 2 compare this reliance on groundfish revenues for the three fleets, coastwide. Comparing the tables to the figures provides state- and fleet-specific fishery information. For example, California open access vessels seem to make up a large portion of the open access vessels that are dependent upon groundfish for a significant portion of their income. And, although the number of Washington vessels is small, the limited entry trawl and nontrawl fleets in Washington rely on groundfish to make up a very significant (87% nontrawl, 96% trawl) portion of total fishing revenues.

Table 6: NUMBER of Vessels With Some 1999 Groundfish Revenue, Grouped by the Percentage of Total 1999 Revenue Derived from Groundfish (by principal groundfish state and fleet)

	Percentage of Total Revenue Derived From Groundfish					
	<5%	**5-10%**	**10-25%**	**25-50%**	**50-75%**	**75-100%**
WASHINGTON:						
Limited Entry						
Trawl	0	0	0	0	1	24
Non-trawl	2	0	1	3	2	52
Open Access	54	9	3	2	2	32
OREGON:						
Limited Entry						
Trawl	1	1	6	16	19	70
Non-trawl	1	0	19	23	5	11
Open Access	195	23	24	17	21	71
CALIFORNIA:						
Limited Entry						
Trawl	5	3	7	19	21	50
Non-trawl	9	4	16	5	10	34
Open Access	366	64	68	71	50	425
COASTWIDE:						
Limited Entry						
Trawl	6	4	13	35	41	144
Non-trawl	12	4	36	31	17	97
Open Access	615	96	95	90	73	528

Note: A vessel having a permit at any time during the year was treated as LE for the year. Any permitted vessel with a trawl endorsement was assigned to the LE trawl group. Only vessels that earned groundfish revenue during 1999 were included. Catch from vessels landed in multiple states was attributed to the state in which the groundfish revenue was greatest.

Table 7: PERCENTAGE of Vessels in Each Fleet With Some 1999 Groundfish Revenue, Grouped by the Percentage of Total 1999 Revenue Derived from Groundfish (by principal groundfish state and fleet)

	Percentage of Total Revenue Derived From Groundfish					
	<5%	**5-10%**	**10-25%**	**25-50%**	**50-75%**	**75-100%**
WASHINGTON:						
Limited Entry						
Trawl	0%	0%	0%	0%	4%	96%
Non-trawl	3%	0%	2%	5%	3%	87%
Open Access	53%	9%	3%	2%	2%	31%
OREGON:						
Limited Entry						
Trawl	1%	1%	5%	14%	17%	62%
Non-trawl	2%	0%	32%	39%	8%	19%
Open Access	56%	7%	7%	5%	6%	20%
CALIFORNIA:						
Limited Entry						
Trawl	5%	3%	7%	18%	20%	48%
Non-trawl	12%	5%	21%	6%	13%	44%
Open Access	35%	6%	7%	7%	5%	41%
COASTWIDE:						
Limited Entry						
Trawl	2%	2%	5%	14%	17%	59%
Non-trawl	6%	2%	18%	16%	9%	49%
Open Access	41%	6%	6%	6%	5%	35%

Note: A vessel having a permit at any time during the year was treated as LE for the year. Any permitted vessel with a trawl endorsement was assigned to the LE trawl group. Only vessels that earned groundfish revenue during 1999 were included.

Figure 1: Number of West Coast Vessels (by Fleet) Deriving Some Portion of Total West Coast Revenue from Groundfish

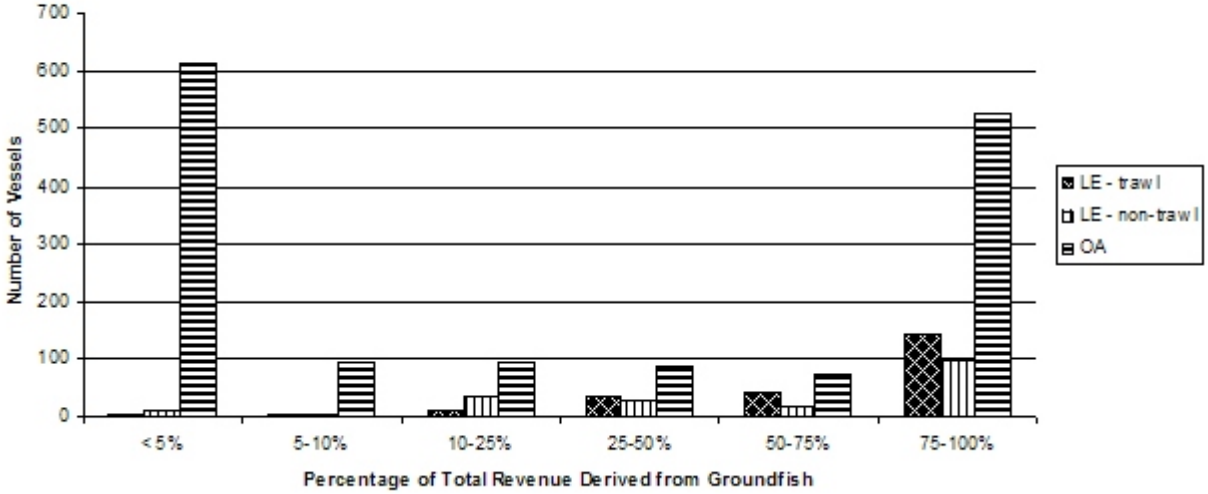
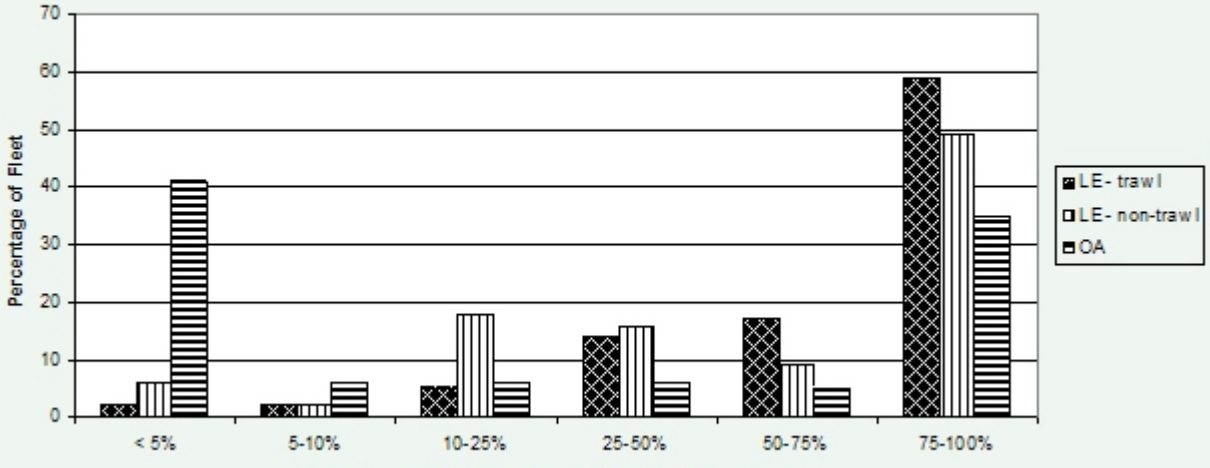


Figure 2: Percentage of West Coast Vessels (by Fleet) Deriving Some Portion of Total West Coast Revenue from Groundfish



7.0 CONCLUSIONS OR FINDING OF NO SIGNIFICANT IMPACT

Amendment 13 would: 1) revise the FMP's definition of the term, "bycatch;" 2) establish a regulatory framework for an observer program in the shore-based groundfish fishery; 3) reduce bycatch and bycatch rates through increased utilization and other management changes; 4) increase flexibility in the annual management measures process; and 5) remove unused limited entry permit endorsements from the FMP. Adopted alternatives for Issues 1-3 would bring the FMP into compliance with Magnuson-Stevens bycatch provisions. Addressing Issue 4 would help the Council to meet its rebuilding requirements for overfished and depleted species while still allowing fisheries access to those species. Issue 5 is a housekeeping measure to removed unused portions of the FMP.

Based on the biological, physical and socio-economic effects of the adopted alternatives for each of the issues that have been assessed in this document, it has been determined that implementation of the preferred alternatives would not significantly affect the quality of the human environment. Therefore, the preparation of an environmental impact statement for the proposed action is not required by Section 102 (2) (C) of the National Environmental Policy Act or its implementing regulations.

Assistant Administrator for Fisheries, NOAA _____ Date

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57 FR 1654, January 15, 1992, Annual specifications and management measures for the 1992 Pacific coast groundfish fisheries.

56 FR 465, January 8, 1991, Annual specifications and management measures for the 1991 Pacific coast groundfish fisheries.

FMP AMENDMENT LANGUAGE – AMENDMENT 13

Draft amending language is in bold; text to be removed has been crossed-out.

2.0 GOALS AND OBJECTIVES

2.1 Goals and Objectives for Managing the Pacific Coast Groundfish Fishery

The Council is committed to developing long-range plans for managing the Washington, Oregon, and California groundfish fisheries that will promote a stable planning environment for the seafood industry, including marine recreation interests, and will maintain the health of the resource and environment. In developing allocation and harvesting systems, the Council will give consideration to maximizing economic benefits to the United States, consistent with resource stewardship responsibilities for the continuing welfare of the living marine resources. Thus, management must be flexible enough to meet changing social and economic needs of the fishery as well as to address fluctuations in the marine resources supporting the fishery. The following goals have been established in order of priority for managing the West Coast groundfish fisheries, to be considered in conjunction with the national standards of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

* * * * *

Utilization.

* * * * *

Objective 11. Strive to reduce the economic incentives and regulatory measures that lead to wastage of fish. **Develop management measures that minimize bycatch to the extent practicable and, to the extent that bycatch cannot be avoided, minimize the mortality of such bycatch. Promote and support monitoring programs to improve estimates of total fishing-related mortality and bycatch, as well as those to improve other information necessary to determine the extent to which it is practicable to reduce bycatch and bycatch mortality.**

2.2 Operational Definition of Terms

* * * * *

Bycatch means fish which are harvested in a fishery, but which are not sold or kept for personal use and includes economic discards and regulatory discards. **Such term does not include fish released alive under a recreational catch and release fishery management program.**

* * * * *

5.1 SAFE Document

For the purpose of providing the best available scientific information to the Council for evaluating the status of the fisheries relative to the MSY and overfishing definition, developing ABCs, determining the need for individual species or species group management, setting and adjusting numerical harvest levels, assessing social and economic conditions in the fishery, and updating the appendices of this fishery management plan (FMP); a SAFE document is prepared annually. Not all species and species groups can be reevaluated every year due to limited state and federal resources. However, the SAFE document will in general contain the following information:

1. A report on the current status of Washington, Oregon, and California groundfish resources by major species or species group.

2. Specify and update estimates of harvest control rule parameters for those species or species groups

for which information is available.

3. Estimates of MSY and ABC for major species or species groups.

4. Catch statistics (landings and value) for commercial, recreational, and charter sectors.

5. Recommendations of species or species groups for individual management by OYs.

6. A brief history of the harvesting sector of the fishery, including recreational sectors.

7. A brief history of regional groundfish management.

8. A summary of the most recent economic information available, including number of vessels and economic characteristics by gear type.

9. Other relevant biological, social, economic, ecological, and essential fish habitat information which may be useful to the Council.

10. A description of any rebuilding plans currently in effect, a summary of the information relevant to the rebuilding plans, and any management measures proposed or currently in effect to achieve rebuilding plan goals and objectives.

11. A list of annual specifications and management measures that have been designated as routine under processes described in the FMP at Section 6.2.

The preliminary SAFE document is normally completed late in the year, generally late October, when the most current stock assessment and fisheries performance information is available and prior to the meeting at which the Council approves its final management recommendations for the upcoming year. The Council will make the SAFE document available to the public by such means as mailing lists or newsletters and will provide copies upon request. A final SAFE may be prepared after the Council has made its final recommendations for the upcoming year and would include the final recommendations, including summaries of proposed and pre-existing rebuilding plans. The final SAFE document, if prepared, would also be made available upon request.

* * * * *

6.2 General Procedures for Establishing and Adjusting Management Measures * * * * *

A. Automatic Actions * * * * *

B. "Notice" Actions Requiring at Least One Council Meeting and One *Federal Register* Notice - These include all management actions other than "automatic" actions that are either nondiscretionary or for which the scope of probable impacts has been previously analyzed.

These actions are intended to have temporary effect, and the expectation is that they will need frequent adjustment. They may be recommended at a single Council meeting (usually November), although the Council will provide as much advance information to the public as possible concerning the issues it will be considering at its decision meeting. The primary examples are those management actions defined as "routine" according to the criteria in Section 6.2.1. ~~These include trip landing and frequency limits for all gear types for widow rockfish, sablefish (including size limits), Pacific ocean perch, the Sebastes complex, nontrawl year-end trip limits for sablefish, and recreational bag limits for rockfish and lingcod~~. **These include trip landing and frequency limits and size limits for all commercial gear types and closed seasons for any groundfish species in cases where protection of an overfished or depleted stock is required, and bag limits, size limits, time/area closures, boat limits, hook limits, and dressing requirements for all recreational fisheries.** Previous analysis must have been specific as to species and gear type before a management measure can be defined as "routine" and acted upon at a single Council meeting. If the recommendations are approved, the Secretary will waive for good cause the requirement for prior notice and comment in the *Federal Register* and will publish a single "notice" in the *Federal Register* making the action effective. This category of actions presumes the Secretary will find that the extensive notice and opportunity for comment on these types of measures along with the scope of their impacts already provided by the Council will serve as good cause to waive the need for additional prior notice and comment in the *Federal Register*.

C. Abbreviated Rulemaking Actions Normally Requiring at Least Two Council Meetings and One *Federal*

Register "Rule" **or "Notice"** - These include ~~all management actions~~ (1) **management actions** being classified as "routine", **(2) trip limits that vary by gear type, closed seasons or areas, and in the recreational fishery, bag limits, size limits, time/area closures, boat limits, hook limits, and dressing requirements the first time these measures are used or** (~~2~~ **3) management measures that** are intended to have permanent effect and are discretionary, and for which the impacts have not been previously analyzed. Examples include changes to or imposition of gear regulations, or imposition of landing**s limits,** frequency limits, **or limits that are differential by gear type, or closed areas or seasons** for the first time on any species or species group, or gear type. The Council will develop and analyze the proposed management actions over the span of at least two Council meetings (usually September and November) and provide the public advance notice and opportunity to comment on both the proposals and the analysis prior to and at the second Council meeting. If the Regional Administrator approves the Council's recommendation, the Secretary will waive for good cause the requirement for prior notice and comment in the *Federal Register* and publish a "final rule" **or "notice"** in the *Federal Register* which will remain in effect until amended. If a management measure is designated as "routine" ~~by "final rule"~~ under this procedure, specific adjustments of that measure can subsequently be announced in the *Federal Register* by "notice" as described in the previous paragraphs. Nothing in this section prevents the Secretary from exercising the right not to waive the opportunity for prior notice and comment in the *Federal Register*, if appropriate, but presumes the Council process will adequately satisfy that requirement.

The primary purpose of the previous two categories of abbreviated notice and rulemaking procedures is to accommodate the Council's September-November meeting schedule for developing annual management recommendations, to satisfy the Secretary's responsibilities under the Administrative Procedures Act, and to address the need to implement management measures by January 1 of each fishing year.

It should be noted the two Council meeting process refers to two decision meetings. The first meeting to develop proposed management measures and their alternatives, the second meeting to make a final recommendation to the Secretary. For the Council to have adequate information to identify proposed management measures for public comment at the first meeting, the identification of issues and the development of proposals normally must begin at a prior Council meeting, usually the ~~July~~ **June** Council meeting.

D. Full Rulemaking Actions Normally Requiring at Least Two Council Meetings and Two *Federal Register* Rules (Regulatory Amendment) * * * * *

6.2.1 Routine Management Measures

"Routine" management measures are those the Council determines are likely to be adjusted on an annual or more frequent basis. Measures are classified as "routine" by the Council through either the full or abbreviated rulemaking process (C. or D. above). In order for a measure to be classified as "routine", the Council will determine that the measure is **appropriate** ~~of the type normally used~~ to address the issue at hand and may require further adjustment to achieve its purpose with accuracy.

As in the case of all proposed management measures, prior to initial implementation as "routine" measures, the Council will analyze the need for the measures, their impacts, and the rationale for their use. Once a management measure has been classified as "routine" through one of the two rulemaking procedures outlined above, it may be modified thereafter through the single meeting "notice" procedure (B. above) only if (1) the modification is proposed for the same purpose as the original measure, and (2) the impacts of the modification are within the scope of the impacts analyzed when the measure was originally classified as "routine." The analysis of impacts need not be repeated when the measure is subsequently modified if the Council determines that they do not differ substantially from those contained in the original analysis. The Council may also recommend removing a "routine" classification.

Experience gained from management of the Pacific coast groundfish fishery indicates that certain measures usually require modification on a frequent basis to ensure that they meet their stated purpose with accuracy. ~~These measures are commercial trip landing limits and trip frequency limits, including landing frequency and notification requirements and recreational bag limits as they have been applied to specific species, species groups, sizes of fish, and gear types.~~ **For commercial fisheries, these measures are trip landing limits and trip frequency limits, including cumulative limits, and notification requirements.** Their purpose in application to the commercial fishery has consistently been either to stretch the duration of the fishery so as not to disturb traditional fishing and marketing patterns, to reduce discards and wastage, or to discourage

targeted fishing while allowing small incidental catches when attainment of a harvest guideline or quota is imminent. **In cases where protection of an overfished or depleted stock is required, the Council may impose limits that differ by gear type, or establish closed areas or seasons. These latter two measures have not historically been imposed through the annual management cycle because of their allocative implications, however, this additional flexibility has become necessary to allow the harvest of healthy stocks as much as possible while protecting and rebuilding overfished and depleted stocks, and equitably distributing the burdens of rebuilding among sectors. The first time a differential trip limit or closed season is to be imposed in a fishery it must be imposed during the annual management cycle (with the required analysis and opportunity for public comment,) and subsequently may be modified inseason through the routine adjustment process.**

For recreational fisheries, bag limits, size limits, time/area closures, boat limits, hook limits, and dressing requirements may be applied to specific species, species groups, sizes of fish and gear types. For the recreational fishery, bag and size limits have been imposed to spread the available catch over a large number of anglers, to avoid waste, and to provide consistency with state regulations.

Routine management measures are also often necessary to meet the varied and interwoven mandates of the Magnuson-Stevens Act and FMP through: achieving the overfished species rebuilding plans, reducing bycatch, preventing overfishing, allowing the harvest of healthy stocks as much as possible while protecting and rebuilding overfished and depleted stocks, and equitably distributing the burdens of rebuilding among the sectors.

~~As of October 1998, the measures listed below by species and gear type had been classified as "routine" measures through the rulemaking process. Recreational bag and size limits have also been designated as "routine."~~

The following measures were classified as routine measures through [insert date of Amendment 13 approval]:

Limited Entry Trip Landing and Frequency Limits

Widow rockfish - all gear
Sebastes complex - all gear
Yellowtail rockfish - all gear
Canary rockfish - all gear
Bocaccio - all gear
Pacific ocean perch - all gear
Sablefish (including size limits) - all gear
Dover sole - all gear
Thornyhead rockfish (separately or combined) - all gear
Pacific whiting - all gear
Lingcod (including size limits) - all gear

Open Access Trip Landing and Frequency Limits

All groundfish species, separately or in any combination - all gear types

All Commercial Fisheries, All Gear Types: In cases where protection of an overfished or depleted stock is required, trip limits may differ by gear type, and time/area closures may be established.

~~Recreational Bag and Size Limits~~

~~Lingcod~~
~~Rockfish~~

All Recreational Fisheries, All Gear Types: For all groundfish species separately or in any combination, bag limits, size limits, time/area closures, boat limits, hook limits, and dressing requirements. The first time one of these measures is imposed in the fishery, it must be

imposed during the annual autumn management cycle.

Any measure designated as "routine" for one specific species, species group, or gear type may not be treated as "routine" for a different species, species group, or gear type without first having been classified as "routine" ~~through the rulemaking process~~. **Each year the annual SAFE document will list all measures that have been designated as routine.**

The Council will conduct a continuing review of landings of those species for which harvest guidelines, quotas, optimum yields (OYs) or specific "routine" management measures have been implemented and will make projections of the landings at various times throughout the year. If in the course of this review it becomes apparent the rate of landings is substantially different than anticipated and that the current "routine" management measures will not achieve the annual management objectives, the Council may recommend inseason adjustments to those measures. Such adjustments may be implemented through the single meeting "notice" procedure.

6.3 Bycatch Management

6.3.1 Bycatch of Nongroundfish Species * * * * *

6.3.2 Standardized Reporting Methodologies

Bycatch and discard survival data, information to assess the effects of bycatch and discard on managed populations and the ecosystem, and data on the socio-economic effects of alternative management measures to reduce bycatch are limited. Due to these limitations, precise estimates of bycatch, bycatch mortality, or associated effects of alternative conservation and management measures in the groundfish fishery are not possible.

Improving estimates for information on total fishing mortality is essential. Sources of this information may include at-sea observer programs, dockside sampling programs, and new technology to monitor fishing activities and catch, as well as better use of industry-reported catch and discard information. Timely summaries of the amount and type of bycatch for each fishery should be collated in annual *Stock Assessment and Fishery Evaluation (SAFE)* reports.

6.3.3 Measures to Control Bycatch

Bycatch and discard create unquantified problems for the groundfish fishery. Solving these problems requires both knowing how much bycatch mortality occurs, and setting management measures to reduce that mortality. Bycatch and bycatch mortality can be measured through observer programs (see below at 6.5.1.2) and through other means. Once it initiates programs to measure bycatch, the Council can better identify and prioritize the bycatch problems in the groundfish fishery, based on the expected benefits to the U.S. and on the practicality of addressing these problems. The Council will develop measures to reduce bycatch and bycatch mortality in accordance with the points of concern or the socioeconomic framework provisions of the FMP. These measures may include but are not limited to:

- **Full retention or increased utilization programs**
- **Setting a shorter-than-year-round fishing season in combination with higher cumulative landings limits**
- **Allowing permit stacking in the limited entry fleet**
- **Gear modification requirements**
- **Catch allocation to, or gear flexibility for, gear types with lower bycatch rates**
- **Re-examining/improving species-to-species landings limit ratios**
- **Time/area closures**

6.4 Recreational Catch and Release Management

* * * * *

6.5 Other Management Measures

6.5.1 Generic
6.5.1.1 Permits * * * * *

6.5.1.2 Observers

All fishing vessels operating in this management unit including catcher/processors, at-sea processors, and those vessels which harvest in the Washington, Oregon, and California area and land in another area, may be required to accommodate **an observer or video-monitoring system for the purpose of collecting scientific data or verifying landings and discard used for scientific data collection.** ~~NMFS-certified, onboard observers for the purposes of collecting scientific data~~. An observer program or video-monitoring system will be considered only for circumstances where other data collection methods are deemed insufficient for management of the fishery. Implementation of any observer program will be in accordance with appropriate federal procedures including economic analysis and public comment.

The Regional Administrator may implement an observer program through a Council-approved federal regulatory framework. Details of how observer coverage will be distributed across the West Coast groundfish fleet will be described in an observer coverage plan. NMFS will publish an announcement of the authorization of the observer program and description of the observer coverage plan in the *Federal Register*.

There may be a priority need for observers on at-sea processing vessels to collect data normally collected at shore based processing plants. Certain information for management of the fishery can be obtained from logbooks and other reporting requirements, but the collection of some types of data would be too onerous for some fishermen to collect. Processing vessels must be willing to accommodate onboard observers and may be required to provide the ~~NMFS-certified~~ **required** observers prior to issuance of any required federal permits.

Observers are required on foreign vessels operating in the Exclusive Economic Zone (EEZ) according to the Magnuson-Stevens Act.

* * * * *

14.0 GROUNDFISH LIMITED ENTRY

* * * * *

14.2.4 Ownership Restriction and Changes in Ownership

1. Only entities (human beings, corporations, etc.) qualified to own a U.S. fishing vessel may be issued or may hold (by ownership or otherwise) an LE permit. (Foreign ownership of LE permits should be limited to the maximum degree possible given what is allowed under the law.)

2. Ownership of a permit will be considered to change when there is an ownership change on U.S. Coast Guard documents, however, an owner can submit documents to demonstrate that the controlling interest has not changed and therefore the change in documentation is not a change in ownership.

3. **An entity qualified to hold an LE permit may hold more than one LE permit. If the Council authorizes a LE permit stacking program, in which a vessel could use multiple permits simultaneously, each LE fishery participant would be required to hold at least one LE "base" permit. An LE base permit is the initial permit necessary to participate in the LE fishery, and subject to all of the requirements described herein for LE permit ownership qualifications, and gear and length endorsements. Requirements and additional privileges for permits "stacked" on to base permits may be authorized in a federal rulemaking.**

14.2.5 Gear Endorsements

1. An LE permit confers no rights without a valid gear endorsement attached.

2. **As of Amendment 13 to the FMP, there is only one functioning type of endorsement, the "A" endorsement. With Amendment 13, the provisional "A" endorsement, the "B" endorsement, and the designated species "B" endorsements were removed as expired or defunct.**

   ~~There are four types of gear endorsements: "A" endorsements, provisional "A" endorsements, "B" endorsements and designated species "B" endorsements.~~

3. Gear endorsements will be affixed to the LE permit and specify type of limited entry gear which may be used to catch Council-managed groundfish.

4. A gear endorsement for a particular gear authorizes the catch of all Council-managed groundfish species with that gear, except in the case of ~~the designated species "B" gear endorsements and for~~ fishing for which a fixed gear sablefish endorsement is required (see Section 14.2.6). ~~Designated species "B" gear endorsements authorize catch of only the designated species specified in the endorsement and bycatch as specified for the joint venture fishery for that species.~~ Limited entry vessels using longline and fishpot gear to catch sablefish against the limited entry quota north of 36°N latitude are required to hold fixed gear sablefish endorsements during periods specified in the regulations, in addition to the required gear endorsement.

5. More than one gear endorsement may be affixed to a single LE permit.

6. An LE permit will not allow the use of limited entry gears to catch any Council-managed groundfish unless a valid gear endorsement for the specific gear is affixed to the LE permit. Trawl gear and Council-managed groundfish may not be on board a vessel at the same time, nor may the gear be deployed, without an LE permit registered for the vessel and endorsed for trawl gear. If a vessel has longline or fishpot gear on board, an LE permit registered for the vessel and the permit is endorsed for the gear on board, regulations for the limited access fishery will apply.

7. Depending on the type of gear endorsement (see Section 14.3 on the specific type of gear endorsements):

   a. the period for which the gear endorsement is valid may be limited, and
   b. the gear endorsement may or may not remain valid when the LE permit is transferred.[*********]

8. Gear endorsements are not separable from the LE permit and therefore may not be transferred separately from the LE permit.[**********]

9. Limitations which apply to a given gear endorsement shall not restrict the use of any other gear endorsement on the same LE permit.

10. Rules on the issuance of gear endorsements and other characteristics of the gear endorsements are specified under sections on each type of gear endorsement (see Section 14.3).

[*********] Unless otherwise noted:
a. Transferable means separable from the vessel owner and vessel.
b. LE permit transferability, with respect to an owner, means the LE permit may be transferred, inherited, sold, bartered, traded, given or otherwise alienated from the LE permit owner.
c. LE permit transferability, with respect to a vessel, means the LE permit may be registered for use with a different vessel.

[**********] The intent of this provision is to not allow the fishing capacity to expand by separate transfer of endorsements which might otherwise go unused.

14.2.7 Size Endorsement Will Specify the Vessel Length

The LE **base** permit will be endorsed with the length overall (as defined for purposes of U.S. Coast Guard documentation) of the vessel for which the LE permit is initially issued. The length for which the LE permit is endorsed will be changed only when LE permits are combined, as per Section 14.2.10, or, in the case of LE permits endorsed for trawl gear, when the size of the vessel used with the permit is more than five feet less than the originally endorsed length. In the latter case, the LE permit will be reissued with a size endorsement for the length of the smaller vessel. Vessels which do not have documents stating their length overall will have to be measured by a marine surveyor or the U.S. Coast Guard and certified for that length.[**********]

If the Council establishes a permit stacking program, that program may or may not require that permits stacked on top of the base LE permit be endorsed with the length overall of the vessel holding the permits.

14.2.8 An LE Permit and Necessary Gear Endorsements Will Be Held by the Owner of Record of the Vessel

* * * * *

14.2.9 Transfer of an LE Permit to Different Owners or Vessels of the Same Owner

1. LE permits may be transferred to other owners for use with other vessels or used with other vessels under the same ownership, but will continue to be restricted by size and gear endorsements **unless otherwise designated through a permit stacking program.**

2. Whenever an owner wishes to transfer an LE permit to a different owner or use an LE permit with a different vessel under the same ownership, the NMFS issuing authority must be notified of the change. Notification is not complete until acknowledged in writing by NMFS.

3. LE **base** permits may be used with vessels greater in length than the endorsed length provided the increase does not exceed five feet of the endorsed length. Original size endorsements will change only when LE permits are combined as per Section 14.2.10,[**********] or when an LE permit with a trawl endorsement is transferred to a vessel five feet less in length than the endorsed length. In the latter case, the LE permit will be reissued with a size endorsement for the length of the smaller vessel.

4. The transfer of LE permits between vessels or owners may not be used to circumvent vessel landing limits.

5. When an LE permit is transferred to a different owner or vessel, provisional "A", "B" and designated species "B" gear endorsements will become invalid, unless the transfer is caused by the total loss of a vessel (as per Section 14.2.9) and ownership of the LE permit is not transferred.

14.2.10 Loss of a Vessel

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14.2.11 Combining LE Permits

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14.2.12 Permit Renewal

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14.3 Multilevel Gear Endorsement System

This section contains a description of the characteristics specific to each type of gear endorsement. Gear

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[**********] While not an immediate cap on vessel capacity, the size endorsement places an upward limit on the amount by which the capacity used with an LE permit may increase.

[**********] Allowance for a slight length increase over the endorsed length is made to provide flexibility in replacing vessels.

endorsements may not be transferred separate from the LE permit to which they are affixed. An LE permit confers no rights without a valid gear endorsement attached. These and other general characteristics of all gear endorsements are described in Section 14.2.5.

14.3.1 "A" Gear Endorsement

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14.3.2 Provisional "A" Gear Endorsement[**********]

14.3.2.1 Overview of the Provisional "A" Endorsement

The provisional "A" endorsement ~~is~~ **was** intended for: (1) the vessel owner who, during the window period, was preparing through construction, conversion or purchase to use a vessel with limited entry gear in the West Coast groundfish fisheries; (2) the owner of a replacement vessel who would **have** otherwise receive**d** an "A" endorsement on an LE permit endorsed for a smaller sized replaced vessel when the replacement ha**d** occurred prior to September 30, 1990; and (3) owners of a vessel ~~landing~~ **that landed** sufficient groundfish during the window but using a gear type ~~which has~~ **that had** been prohibited by a state (Washington, Oregon or California) or the Secretary of Commerce subsequent to the window period. The purpose of the provisional "A" endorsement ~~is~~ **was** to require the owner demonstrate, by actual catching activity, intent to participate in the West Coast groundfish fisheries with the vessel and limited entry gear. When intent ha**d** been demonstrated (as per Section 14.3.2.4), the provisional "A" endorsement ~~may be~~ **could have been** upgraded to an "A" endorsement. The provisional "A" endorsement allow**ed** the catch of all Council-managed groundfish species, ~~except as noted,~~ with the specified gear; be**came** invalid when the LE permit ~~is~~ **was** transferred, except in the case of a lost vessel; and ~~is~~ **was** valid for a maximum of three years.

~~14.3.2.2 Description, Use and Transferability of the Provisional "A" Endorsement~~

~~1. Each provisional "A" endorsement affixed to an LE permit will specify a combination of gear type and vessel that the LE permit may be used (e.g., "Provisional 'A'-Trawl-vessel identification").~~

~~2. The vessel identified in the provisional "A" endorsement will be allowed to catch all Council-managed groundfish with the gear specified in the provisional "A" endorsement, except for sablefish harvested north of 36°N latitude during times and with gears for which a fixed gear sablefish endorsement is required.~~

~~3. The provisional "A" endorsement will become invalid if the LE permit is transferred to a different owner or vessel, unless the transfer to another vessel is caused by the total loss of a vessel (as per Section 14.2.9) and ownership of the permit does not change.~~

~~14.3.2.3 Provisional "A" Endorsement Initial Issuance Criteria~~

~~1. A provisional "A" endorsement will be affixed to a vessel's LE permit for each gear that the vessel qualifies for under these provisional "A" endorsement initial issuance criteria.~~

~~2. No provisional "A" endorsement will be issued if a vessel has already failed to meet the upgrade criteria (Section 14.3.2.4). If a vessel has already met the upgrade criteria at the time of initial issuance, an "A" endorsement, rather than provisional "A" endorsement, may be issued.~~

3. ~~A vessel must qualify separately for each gear that a provisional "A" endorsement is requested.~~

[**********] ~~If this type of endorsement were not provided, vessels constructed, converted or purchased during the window destined for any fishery in the U.S. could qualify the owner for an "A" endorsement in the West Coast groundfish fishery. The owner could then sell the permit for use with another vessel in the groundfish fishery and never participate in the fishery. Therefore, demonstration of intent through a period of substantial participation in the fishery is required before an "A" endorsement is issued. Opportunity to demonstrate this intent is afforded through the provisional "A" endorsement.~~

a. Owners of vessels qualifying for a provisional "A" endorsement under the following construction or conversion criteria for initial issuance must select one gear type for endorsement at application time.

b. Owners of vessels qualifying for a provisional "A" endorsement under the following prohibited gear criteria for initial issuance may be issued only one provisional "A" endorsement regardless of the number of gears for which the vessel might meet the qualifying requirements.

4. For a vessel to be considered "under conversion," for the purpose of determining provisional "A" endorsement eligibility:[**********]

a. the conversion must have impacted the vessel's ability to meet MLRs;

b. previous to the conversion, the vessel must not have been structurally capable of fishing for groundfish with the specified limited entry gear, and the conversion must have involved a structural change to the vessel which makes it functionally able to fish for groundfish with the specified gear; and

c. the amount invested in conversion (including all equipment and gear) must be more than

(1) 25 percent of the appraised value of the converted vessel, or
(2) $10,000

whichever is less, and of which not more than one-fifth of the expenditures may be for gear.[**********]

d. The NMFS issuing authority may develop additional administrative criteria for determining whether a vessel was under conversion and whether the conversion impacted the vessels ability to meet MLRs.

5. A person who contracted to have a vessel constructed or converted may qualify for a provisional "A" endorsement for the vessel if:

a. a contract for any part of the work was signed and substantial earnest money was paid (10 percent or more of the value on that contract) prior to August 1, 1988; and

b. the contract for the vessel under construction (or ownership of a vessel under conversion) is not transferred or otherwise alienated from the contract holder between August 1, 1988 and the issuance of the endorsement;[**********] and

[**********] Specifications of the conversion criteria in earlier drafts stated that the purchase of gear alone will not be considered sufficient to establish that a vessel is under conversion. This provision is contained by implication in Criteria b and c. To maintain this intent, any revision to these two criteria should continue to require, by implication, that the purchase of gear alone would not be sufficient to qualify the vessel for conversion provisions.

[**********] Gear is defined as anything that is not permanently affixed to the vessel (not welded or bolted). Only expenditures for electronic equipment, which is specifically required for use of the gear in the groundfish fishery, will be included as an expenditure for gear for the purpose of the conversion criteria.

[**********] The prohibitions against transfer of construction contracts prevents keels laid prior to August 1, 1988 on sales speculation from qualifying purchasers buying after that date.

c. construction or conversion had not been completed[**********] prior to July 11, 1984; and

d. fishing commenced prior to September 30, 1990.

6. An owner who constructed or converted a vessel may qualify for a provisional "A" endorsement for the vessel if:

a. the keel was laid or conversion began prior to August 1, 1988; and

b. vessel ownership is not transferred or otherwise alienated from the owner between August 1, 1988 and issuance of a provisional "A" endorsement; and

c. construction or conversion was not completed prior to July 11, 1984 ; and

d. fishing commenced prior to September 30, 1990.

7. A vessel owner who purchased the vessel during the window period and used a limited entry gear to catch and land or deliver Council-managed groundfish but does not meet MLRs for an "A" endorsement may qualify for a provisional "A" endorsement endorsed for the limited entry gear(s) used during the window period, provided ownership of the vessel is not transferred between August 1, 1988 and the issuance of the endorsement.

8. An owner of a replacement vessel (i.e., a vessel that replaces, through construction, conversion, purchase or trade, a vessel that would qualify for "A" endorsement) more than five feet longer than the replaced vessel may be issued a provisional endorsement for the length of the replacement vessel if the replacement vessel is in place prior to September 30, 1990. "In place" means the owner of the vessel which would have qualified has acquired a replacement vessel and disposed of the replaced vessel (the vessel which would have qualified), while reserving the right to a future LE permit issued on the basis of the history of the replaced vessel. Such a vessel owner must choose between (1) an "A" endorsement on an LE permit with a size endorsement for the replaced vessel or (2) a provisional "A" endorsement on an LE permit with a size endorsement for the replacement vessel. The endorsement would be for the gear(s) that the replaced vessel would have qualified for an "A" endorsement.

9 If after the window period a gear is prohibited by a state (Washington, Oregon or California) or the Secretary of Commerce, the owners of such vessels who would not otherwise qualify for an "A" or provisional "A" endorsement may qualify for a provisional "A" endorsement for one of the three limited entry gears subject to the following provisions:

a. In order to qualify for an endorsement for a particular limited entry gear, the vessel must have used the prohibited gear to make sufficient landings of groundfish during the window period to meet the MLR for the limited entry gear that the endorsement is to be issued (as specified in Section 14.3.1.3 paragraph 4).

b. If a vessel would qualify an owner for an endorsement for more than one limited entry gear, the owner must choose from among those gears the type of gear for which the endorsement will be issued.

c. No endorsement will be issued if none of the MLRs for limited entry gears were met with the prohibited gear.

d. If an "A" or provisional "A" endorsement was previously issued for the vessel and the endorsement was subsequently transferred or expired, no endorsement may be issued under these criteria for prohibited gear.

[**********] For vessels qualifying under construction provisions, completion is defined as occurring when a landing or delivery of any kind of fish is made anywhere. For vessels qualifying under conversion provisions, completion would occur with the first such landing after vessel conversion began.

10. The NMFS review authority will have discretionary powers to grant exceptions to the qualification criteria on specified grounds. The basis on which the NMFS review authority may grant exceptions are described in Section 14.3.5.

14.3.2.4 Criteria for Upgrading a Provisional "A" to an "A" Endorsement

1. A provisional "A" endorsement may be upgraded to an "A" endorsement by demonstrating through actual catch intent to participate in the Council-managed groundfish fishery with the limited entry gear specified in the endorsement.

2. To demonstrate intent to participate in the Council-managed groundfish fishery and in order to receive the endorsement upgrade, a holder of a provisional "A" endorsement must use or have used, as per paragraph 3 of this section, the vessel to receive the endorsement upgrade in each of the first three 365-day annual periods commencing with the earliest date of:

   a. endorsement issuance;
   b. vessel completion[**********] for vessels qualifying under the construction or conversion provision;
   c. vessel purchase for vessels qualifying under purchase provisions; or
   d. vessel replacement for vessels qualifying under replacement provisions.

3. For upgrading a provisional "A" endorsement, "use" will be defined for a particular 365-day period as one fourth of the MLR:[**********]

   Trawl: At least 2 days in which over 500 pounds of any groundfish species are landed or delivered, or 113 mt of landings or deliveries of any groundfish species except Pacific whiting, or 5 days in which over 500 pounds of Pacific whiting are landed or delivered, or 938 mt of landings or deliveries of Pacific whiting.

   Longline: At least 2 days in which over 500 pounds of any groundfish species are landed or delivered, or 10 mt of landings or deliveries of any groundfish species.

   Fishpot: At least 2 days in which over 500 pounds of any groundfish species are landed or delivered, or 36 mt of landings or deliveries of any groundfish species.

14.3.2.5 Expiration of the Provisional "A" Endorsement

1. The provisional "A" endorsement will expire at the end of any annual period in which a vessel's landings (or deliveries) are not sufficient to meet the use criteria. (The maximum duration of a provisional "A" endorsement is three years.)

2. The provisional "A" endorsement expires if the LE permit it is attached to is transferred, except in the case of total loss of a vessel (as per Section 14.3.2.2, paragraph 3).

3. The provisional "A" endorsement expires on failure to renew the permit (as per Section 14.2.11).

4. In the event the provisional "A" endorsement expires, another provisional "A" endorsement will not be issued.

[**********] One-fourth of the MLR is the approximate equivalent of the annualized MLR. Thus, vessels are required to land at a rate which equalized the average rate required for the window period.

14.3.3 "B" Gear Endorsement

14.3.3.1 Overview of the "B" Endorsement

The "B" endorsement ~~is~~ **was** intended for the vessel owner who was active in the West Coast groundfish fishery prior to the cut-off date (August 1, 1988) with a limited entry gear, but did not land sufficient groundfish with the gear during the window period to qualify for an "A" endorsement. The "B" endorsement ~~provides~~ **provided** for an adjustment period during which a vessel owner ~~may~~ **could** seek to acquire a permit with an "A" endorsement or find an alternative fishery. The "B" endorsement which ~~allows~~ **allowed** the catch of all Council-managed groundfish species with the gear and vessel specified in the endorsement, **became** ~~becomes~~ invalid when the LE permit ~~is~~ **was** transferred or **after December 31, 1996, which was three years** three years after implementation of the limited entry program. To qualify for a "B" endorsement, an owner must **have** own**ed** a vessel which ~~meets~~ **met** the initial issuance requirements and must have owned it during and continually since the time the qualifying activities occurred.

In accordance with the FMP, the "B" endorsement program expired on December 31, 1996. Amendment 13 to the FMP removed expired "B" endorsement language from the FMP.

~~14.3.3.2 Description, Use and Transferability of the "B" Endorsement~~

~~1. Each "B" endorsement affixed to an LE permit will specify a combination of gear type and vessel with which the LE permit may be used (e.g., "B"-Trawl-vessel identification).~~

~~2. The vessel identified in the "B" endorsement will be allowed to catch all Council-managed groundfish with the gear specified in the "B" endorsement.~~

~~3. The "B" endorsement will become invalid if vessel ownership changes, or if the LE permit is transferred to a different owner or vessel, unless the transfer to another vessel is caused by the total loss of a vessel (as per Section 14.2.9) and ownership of the permit does not change.~~

~~14.3.3.3 "B" Endorsement Initial Issuance Criteria~~

~~1. A "B" gear endorsement will be affixed to a vessel's LE permit for each gear that the vessel qualifies under these "B" endorsement initial issuance criteria.~~

~~2. A vessel must qualify separately for each gear for which a "B" endorsement is requested.~~

~~3. Vessel owners may qualify if they:~~

~~a. own a vessel which landed or delivered (JV or domestic) at least 500 pounds of groundfish with limited entry gear on at least three separate days prior to August 1, 1988, but during the window period did not meet the MLRs for an "A" endorsement; and~~

~~b. have continuously owned the vessel during and since the last making of the landings described in paragraph a (except in the case of vessel loss, see Section 14.2.9).~~ ~~**********~~

~~4. An owner will not be issued a "B" endorsement for the same gear for which an "A" or provisional "A" endorsement may be received except as follows. If an owners fails in an attempt to upgrade a provisional "A" endorsement to an "A" endorsement, and if the provisional "A" endorsement was not~~

~~**********~~ ~~The continuous ownership provision prevents individuals purchasing vessels after the cut-off date, where the vessel meets the first criteria, from qualifying for a limited duration endorsement, and prevents the repurchase of a vessel by a previous owner in order to qualify.~~

~~**********~~ ~~Ownership will be considered to change when there is an ownership change on the U.S. Coast Guard documentation; however, an owner can submit documents to demonstrate that the controlling interest has not changed and therefore the change in documentation is not a change in ownership.~~

~~issued under initial issuance criteria covering replacement of smaller qualifying vessels, the owner may then apply for and receive a "B" endorsement if the vessel meets the other initial issuance criteria for "B" endorsements.~~

~~5. The NMFS review authority will have discretionary powers to grant exceptions to the qualification criteria on specified grounds. The basis on which the NMFS review authority may grant exceptions are described in Section 14.3.5.~~

~~14.3.3.4 Duration of the "B" Endorsement~~

~~1. The "B" endorsement will expire three years after implementation of the program.~~

~~2. The "B" endorsement will expire if the LE permit it is attached to is transferred to another vessel or owner, except in the case of total loss of a vessel (as per Section 14.3.3.2).~~

~~3. The "B" endorsements will expire on failure to renew an LE permit as per Section 14.2.11.~~

14.3.4 Designated Species "B" Gear Endorsements

14.3.4.1 Overview of the Designated Species "B" Endorsement

The designated species "B" gear endorsement ~~is~~ **was** intended to allow for expansion of domestic processing of underutilized species in the event the limited entry fleet (those holding LE permits other than the designated species "B" endorsement holders) **was** ~~is~~ unwilling to harvest the full amount of the underutilized species desired by domestic processors or acceptable biological catch, whichever ~~is~~ **was** less. In this event, designated species "B" endorsements would ~~be~~ **have been** issued to harvesters willing to deliver to domestic processors. In addition, the endorsement may **have been** ~~be~~ issued when the possibility ~~exists~~ **existed** that an apportionment to TALFF ~~will~~ **would** occur. In ~~this~~ **that** event, designated species "B" endorsements would ~~be~~ **have been** issued to harvesters willing to deliver to JV processors. A separate endorsement ~~is~~ **was** required for each combination of gear type and species. The designated species "B" endorsement ~~allows~~ **allowed** the catch of the specified species with the gear and vessel specified in the endorsement. The endorsement ~~becomes~~ **became** invalid when the LE permit ~~is~~ **was** transferred and would **have** expire**d** at the end of the fishing year.

Amendment 12 to the FMP declared all species managed under the FMP to be fully utilized. Amendment 13 removed the designated species "B" endorsement option from the FMP.

~~14.3.4.2 Description, Use and Transferability of the Designated Species "B" Endorsement~~

~~1. Each designated species "B" endorsement affixed to an LE permit will specify the combination of gear type, vessel and species with which the LE permit may be used (e.g., "Designated Species "B"-Trawl-shortbelly rockfish-vessel identification").~~

~~2. The vessel identified in the designated species "B" endorsement will be allowed to catch the species specified in the endorsement with the gear specified in the endorsement.~~

~~3. Deliveries may be made only to domestic processors (including catcher-processors delivering to themselves), unless the possibility of an apportionment for TALFF exists as per Section 14.3.4.3, paragraph 4.~~

~~4. By-catch allowances will be established using the procedures specified for incidental allowances in JV and foreign fisheries as outlined at 50 CFR Part 663, Appendix II.J.~~

~~5. The designated species "B" endorsement will become invalid if the LE permit is transferred to a different owner or vessel.~~

~~14.3.4.3 Designated Species "B" Endorsement Initial Issuance Criteria~~

1. A designated species "B" gear endorsement will be affixed to a vessel's LE permit for each combination of gear and species for which the vessel qualifies under these designated species "B" initial issuance criteria.

2. Designated species "B" endorsements will be issued for only Pacific whiting, jack mackerel north of 39°N and shortbelly rockfish.

3. A vessel must qualify separately for each combination of gear and species for which a designated species "B" endorsement is requested.

4. In the fall of each year, NMFS will determine the limited entry fleet's commitment********** (the commitment of those holding LE permits with "A", provisional "A" or "B" endorsements) to harvest a particular underutilized species for domestic processors in the following year. If this commitment is less than domestic annual processing and the harvest guideline or quota for the species, designated species "B" endorsements valid for delivery to domestic processors only (including catcher-processors delivering to themselves) will be issued in numbers necessary for full domestic utilization. Additionally, if the procedures specified in Sections 5.8 and 5.9 of this FMP would result in the apportionment of TALFF, "B" endorsements valid for delivery to foreign processors will be issued in numbers necessary to fulfill JV processing.

5. The NMFS issuing authority will grant the designated species "B" endorsements first on the basis of seniority and then on a first come basis. Seniority will be based on use of the designated species "B" endorsement in previous years. If there are more seniority or first come applicants with equal priority than endorsements to be issued, a lottery may be held to determine who should receive the endorsements. In the first year of issuance for a particular species, endorsements will be issued first on the basis of seniority (number of years) in the fishery for the designated species rather than use of the designated species "B" endorsement.

6. A designated species "B" endorsement catch limit will be established as the harvest guideline or quota for the designated species minus the commitment of the limited entry fleet. If at any time during the fishing year it is determined that any part of the limited entry fleet commitment will not be taken, a reapportionment will be made to the designated species "B" endorsements

14.3.4.4 Expiration of the Designated Species "B" Endorsement

1. The designated species "B" endorsement expires at the end of the calendar year.

2. The designated species "B" endorsement expires if the LE permit to which it is attached is transferred to a different owner or vessel.

14.3.4.5 Designated Species "B" Gear Endorsements for Holders of "A", Provisional "A" and "B" Gear Endorsements

1. "All-species" endorsement ("A", provisional "A" or "B" endorsements) holders must hold designated species "B" endorsements to catch an underutilized species with gear for which they do not hold an all-species endorsement.

2. An all-species endorsement holder is not required to hold any kind of designated species "B" endorsement for the same gear for which an all-species endorsement is held.

3. A provisional "A" or "B" endorsement holder may apply for and receive a designated species "B" endorsement for the same gear for which a provisional "A" or "B" endorsement is held, provided the endorsement holder meets the initial issuance criteria for a designated species "B" endorsement.

********** "Commitment" means a permit holder's definite arrangement (by contract or agreement) with a specific domestic processor to deliver an estimated amount of the underutilized species.

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