

DRAFT DISCUSSION FOR BYCATCH AND MANAGEMENT MEASURES AMENDMENT
TO THE GROUND FISH FISHERY MANAGEMENT PLAN

ISSUE 1. DEFINITION OF BYCATCH

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 (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 the Council first addressed the 1996 Sustainable Fisheries Act requirements, the Council recommended amending the FMP's definition of bycatch to read as follows: "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 Council may not wish to include such reference in its FMP definition of "bycatch," as the Pacific coast groundfish FMP does not include a recreational catch and release fishery management program. Maintaining the status quo definition would keep the FMP in compliance with the Magnuson-Stevens Act without adding text that would be confusing in its reference to a program not used by the FMP.

ISSUE 2. BYCATCH PROVISIONS

DISCUSSION. In September 1996, Congress adopted the Sustainable Fisheries Act to significantly amend the then-named Magnuson Fishery Conservation and Management Act. Changes to the Magnuson-Stevens Act included the addition of three new national standards for fishery conservation and management. National standard (9) now reads,

"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."

Bycatch is additionally addressed under Section 303 of the Magnuson-Stevens Act, "Contents of Fishery Management Plans," at "Required Provisions," paragraph (11), such that any fishery management plan that is prepared by any council, or by the Secretary, shall --

"(11) 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."

At "Discretionary Provisions" in that same section, paragraph (10) allows that FMPs may --

"(10) include, consistent with the other provisions of this Act, conservation and management measures that provide harvest incentives for participants within each gear group to employ fishing practices that result in lower levels of bycatch or in lower levels of the mortality of bycatch."

The Council adopted Amendment 11 to bring the FMP into compliance with the revised Magnuson-Stevens Act. Among other things, Amendment 11 included a bycatch management objective

and a framework for bycatch reduction measures. The bycatch management objective was essentially a revision of one of the FMP's management objectives, listed under "Utilization," at Objective 11. Prior to Amendment 11, this objective read, "Strive to reduce the economic incentives and regulatory measures that lead to wastage of fish." Amendment 11 proposed revising this objective to read as follows:

"Strive to reduce the economic incentives and regulatory measures that lead to wastage of fish. Also, 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. In addition, 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."

The framework for bycatch reduction measures stated that the Council would,

"identify and prioritize the bycatch problems in the fishery, based on the benefits to the U.S. expected to accrue from addressing these problems and the practicality of these problems. The Council will develop measures to reduce bycatch and bycatch mortality in accordance with the points of concern or socioeconomic framework provisions of 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. NMFS rejected Amendment 11's bycatch provisions as failing to meaningfully respond to the bycatch requirements of the Magnuson-Stevens Act. NMFS further requested that developmental documents for the FMP's bycatch provisions fully analyze the bycatch implications of the FMP's management measures and describe the Council's past efforts and planned future efforts to reduce bycatch and to establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the groundfish fishery. The agency requested that the analysis include: a discussion of how bycatch is reduced to the maximum extent practicable under current management measures, an evaluation of standardized reporting methodologies that might be used to assess bycatch rates in the groundfish fishery, and an analysis of all practicable alternatives to the current year-round landings limit management system that could be expected to result in a reduction of bycatch rates.

BACKGROUND -- MANAGING TO ACCOUNT FOR AND MINIMIZE BYCATCH.

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". 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. 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 decrease 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 bycatch 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. 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 that could 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 interception rates for protected salmon stocks. The whiting fleets 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 vigorous for sustainable harvest on the very low productivity west coast rockfish stocks. 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.

In 1991 and 1992, the Council's bycatch 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%.

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%.

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.

	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 <i>Sebastes</i> 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, like Dover sole, is curtailed to prevent overharvest of the less abundant species, like 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. Additionally, by setting two-month cumulative landings limit periods for some species, the number of cumulative limit periods in the year is reduced, and consequently the number of opportunities for meeting and exceeding limits.

Management measures for 2000 include new and creative ways of particularly reducing the interception of overfished species. 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 incorporate the spawning and nesting period for lingcod. 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 despite 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 these species, but allow small landings of these species in cases where they may be 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, where several of the overfished species congregate. 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.

In addition to crafting rockfish harvest to reduce bycatch and discard of overfished species, the 2000 management measures 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 large gear designed to bounce over rough rockpiles tends to allow those vessels greater access to areas where several of the overfished species congregate. 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.

Finally, at the GMT's recommendation, the Council revised its historical practice of managing *Sebastes* complex species 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 about the opportunity for lower-abundance, higher-valued species to be harvested at unsustainable rates within this framework. In response to these concerns, the Council separated the ABCs/OYs for the more abundant 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 reduce the likelihood of overharvesting both overfished and depleted species as well as 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.

STANDARDIZED REPORTING METHODOLOGIES CURRENTLY IN USE. Most of the standardized reporting methodologies that are or have been in use in the Pacific coast groundfish fishery are used in the whiting fisheries. Whiting fisheries are generally considered distinct from fishing activities targeting other species of groundfish within the cumulative landings limit management program. Whiting form dense aggregations that are nearly pure whiting; however, because these are very high volume fisheries, bycatch monitoring has been relatively rigorous. In 1998, whiting accounted for over 80% of all groundfish harvested, by weight, from the FMP management area.

There are three fairly distinct sectors in the whiting fishery: the shoreside sector, composed of catcher vessels that deliver their whiting catch to shorebased processing plants; the mothership sector, composed of catcher vessels that deliver their whiting catch to at-sea processing ships, as well as the processing ships themselves; and, the catcher/processor sector, composed of large vessels that both catch and process whiting at-sea. The catcher/processor and mothership sectors are together referred to as the "at-sea fleet." In addition to these sectors, there is also a treaty tribal fishery for whiting off the coast of Washington State, which harvests and processes with catcher boats and a mothership. Whiting fishing, whether by small catcher vessels or by large catcher/processors, is a mid-water fishery.

Standardized reporting methodologies used in West coast fisheries for whiting and other groundfish are described by program, below.

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 Alaskan certified observer contracting company of their choice 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 listed as threatened or endangered under the Endangered Species Act. This program provides observer monitoring of 43% of the whiting hauls delivered to mothership processors, and 98% of the hauls of catcher-processors.

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 assure 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.

Because of the logistical difficulties of managing the observer program within the agency, the proposed rule drafted by NMFS and supported by the Council has not yet been published. Nonetheless, 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 very precise inseason management efforts, as well as the inseason and post-season bycatch monitoring efforts. (A summary report on the 1999 non-tribal whiting fishery is attached as an appendix to this document to provide an example of bycatch monitoring within the whiting fishery.)

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, haul 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.

Shoreside Whiting Fishery Exempted Fishing Permits. Since 1992, NMFS has been issuing Experimental/Exempted Fishing Permits (EFPs) to whiting catcher vessels delivering their landings to shorebased processing plants. The intent of the 1992 pilot EFPs was to allow catcher vessels to bring their whiting catch to shore without having to sort out 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 lowered through the time/area salmon conservation closures. The program was revised for 1995, shifting the monitoring focus from at-sea salmon bycatch monitoring to shoreside groundfish overages monitoring. 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 delivering whiting to shoreside processing plants	29	25	33	34	39	40	38	36
Catcher vessels with EFPs delivering 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.

Enhanced Data Collection Project (EDCP) During the 1995 through 1998 fishing years, ODFW organized the EDCP in cooperation with the Washington Department of Fish and Wildlife, California Department of Fish and Game, Pacific States Marine Fisheries Commission, and Northwest Food Strategies, to conduct an expanded logbook program and an observer program for West Coast groundfish non-whiting trawl fisheries. The EDCP's original goal was to establish accurate rates of total catch and discard in the groundfish fishery, and to provide this information in usable form for fishery scientists and management analysts. Funding for this project was provided by ODFW, the Oregon Trawl Commission, the NMFS Northwest Fisheries Science Center, and the West Coast Seafood Processors Association.

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 that required permit holders to collect discard information in an enhanced logbook while continuing to record landed catch, and allowed permit holders to retain prohibited salmon species for distribution to hunger relief agencies; and a "Class B" EFP with the same responsibilities as the "Class A" permit, but with a requirement to carry an observer. EDCP observers were charged with monitoring quantities and rates of discards, species composition of discards, halibut viability information, and with conducting some biological sampling. A third class of permits had been planned for the EDCP that 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 there are currently no standardized reporting methodologies in use within the non-whiting groundfish fleet. Many of the assumed discard rates in the groundfish cumulative landings limit fishery are based on the 1988 Pikitich study mentioned above. At its April 1999 meeting, the Council indicated its support for an observer program in the non-whiting groundfish fisheries, and the expectation that such a program could provide updated and improved bycatch and discard estimates for those fisheries.

STANDARDIZED REPORTING METHODOLOGIES IN DEVELOPMENT, OR AVAILABLE FOR FUTURE CONSIDERATION. (Primarily for non-whiting groundfish fisheries.)

Observer Program and Draft Observer Rules Framework. 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, and 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 that deliver to shoreside processing plants, the Council proposed development of an on-board observer program at its April 1999 meeting. At that time, the Council's goal was to have the regulatory structure necessary to implement an observer program ready for implementation in 2000, in anticipation of NMFS receiving a \$2 million Congressional allocation to fund an observer program for the West Coast groundfish fishery. 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. At its June 1999 meeting, the Council received a committee report, which included a list of total catch data collection goals:

- 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 meeting, 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.

Although NMFS did not receive the anticipated Congressional funding for a West Coast observer program in 2000, NMFS and the Council have agreed upon the efficiency benefits of providing a regulatory framework to support an observer program, should future funding mechanisms for such a program become available. To this end, the agency and the Council are continuing to design a statistically valid observer sampling program, and planning to establish the general regulations necessary to support an at-sea sampling program. These regulations would not specify observer coverage requirements for individual vessels, but instead provide the regulatory support necessary to start up an observer program.

Mandatory Bycatch Reporting in Logbooks. The current state logbooks require that trawl vessels report their retained catch, not their total catch. Retained catch reporting can be checked against fish tickets, which provide accounting of landed catch. An alternative to this system might be a logbook program that requires all vessels landing groundfish to report total catch. Under such a program, fish tickets would no longer provide a useful comparison because fish tickets cannot account for discarded catch. Historically, the most effective comparison agent for mandatory logbook requirements has been a simultaneous observer program. 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.

One challenge with expanding 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 information from other vessels. Vessel operators who participate in the trawl logbook program sometimes complain that their logbook information is not used by fishery managers. This cumbersome information-transfer process might be made more efficient, and the resulting data more useful, by an electronic logbook program.

NMFS Northwest Fisheries Science Center (NWFSC) has been developing an Electronic Fish Catch Logbook (EFCL), and has plans to demonstrate a prototype in the coming year. In September 1997, the NWFSC began Stage I of the project by hiring a contractor to review existing fish catch data collection systems, identify the users' needs for an electronic logbook, review technology available on commercial vessels and in the marketplace, and determine the attributes of the prototype EFCL.

Through research and interviews with fishers, processors, and scientists, the NWFSC found a common interest among these groups for sharing logbook data across communities, and identified the following objectives for an EFCL system:

- Allow electronic logbook data reporting.
- Allow electronic reconciliation of logbook data with fish ticket information.
- Allow electronic reporting of observer data.

Stage II of the EFCL project began in April 1998. For Stage II, the NWFSC analyzed available technology to create a field-ready prototype electronic logbook. Designing the prototype included consultations with West Coast fishing communities, to ensure that the prototype logbook would meet the needs of both scientists and fishers.

NWFSC is now in Stage III of the EFCL project. In this stage, the NWFSC will build field-ready prototypes, for testing in the fisheries. The NWFSC anticipates that the prototype electronic logbooks will be ready for testing in the first half of 2000. Once the prototype testing is finished, the NWFSC will analyze the efficacy of the prototype and the usefulness of data gathered. Test results and analysis will be made available to the Council, so that the Council may determine whether electronic logbooks would be useful to the management of West Coast groundfish fisheries. 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.

Catch Monitoring by Camera. In the blackcod seamount fishery off British Columbia, fishers have been working with new video technology to test the use of cameras in lieu of human observers. Participation in groundfish fisheries off the coast of British Columbia requires strong observer coverage, and fishers are searching for ways to reduce the cost of carrying observers by proposing technological alternatives. The video-surveillance system tested in the blackcod 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 even when the vessel's electronic system fails. These camera systems have been provided to participating vessels by an independent contractor (Archipelago Marine

Research,) which 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.

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 might be most useful in fisheries that target particular species (like fixed gear sablefish fisheries), rather than in multi-species fisheries. Similar to electronic logbooks, data from a video-surveillance system could best provide bycatch information if it were used simultaneously with human observer coverage.

VMS. Vessel Monitoring Systems (VMS) use 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 gear conflicts with nearshore fisheries. 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.

ALTERNATIVES TO THE CURRENT GROUND FISH FISHERY MANAGEMENT REGIME. As described above in the background discussion, the current cumulative landings limit management regime 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.

Because groundfish fisheries are managed for year round landings, fishers and processors can use groundfish to remain operational 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 probably seemed 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 the classic phrase, "too many boats chasing after too few fish," has come to describe the West Coast groundfish fishery. With overcapacity and lower overall harvest levels, cumulative period limits have also dropped. For some vessels participating in the fishery, fishing at levels lower than or consistent with current cumulative period limits may be impossible. While low landings limits are needed to ensure both a year round fishery and sustainable harvest rates, low landings limits may also induce regulatory discards.

Fish stocks and cumulative landings limits have reached levels low enough to cause economic hardship in many fishing communities. There are alternatives to the cumulative landings limit management regime, and the Council faces the challenge of considering whether shifting to one of those alternatives would result in a more economically and biologically stable fishery. Depending on the management alternative chosen, the Council may be able to convert the fishery to a management regime that protects overfished and depleted fish stocks, improves the economic situation of its participants, and reduces bycatch and

bycatch mortality. Alternatives to the current management regime that could be expected to address bycatch concerns fall into three categories:

1. Management alternatives that revise cumulative landings limits regime to reduce bycatch.
2. Management alternatives *to* the cumulative landings limit regime that could be expected to reduce bycatch over current management system.
3. Management tools that could be expected to reduce bycatch under any management regime.

A discussion between the GMT and the public at the February 7-9, 2000 GMT meeting resulted in the following list of management options for reducing bycatch in the groundfish fisheries:

Management alternatives that revise cumulative landings limits regime to reduce bycatch.
Shorten fishing season and raise cumulative landings limits
Permit stacking and associate cumulative landings limits with permits, not boats
Full retention requirement or allow retention of overages (voluntary forfeiture? observers?)
Management alternatives to the cumulative landings limit regime that could be expected to reduce bycatch over current management system.
Derby fisheries for some/all species
IFQ program (possibly with individual bycatch quotas for non-target species?)
Management tools that could be expected to reduce bycatch under any management regime.
Gear modification requirements
Vessel/permit buyback
Incentives for bycatch reduction, such as higher landings limits or fishing in certain areas available to vessels with lowest bycatch rates -- would require observer verification
Catch allocation to gear types with lower bycatch rates
Discard caps -- entire fishery closes when discard cap of particular species is achieved
Re-examine/improve species-to-species landings limit ratios within stock complexes
Time/area closures -- like closed "hot spots" to reduce bycatch of species with known areas of aggregation, or like 2000 lingcod spawning closure
Complete closures (marine reserves) for areas of interception of species designated for protection

Options to address these possible management revisions will be fully developed for the April 2000 Council meeting.

ISSUE 3. 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 (variation [*recreational*] on Alternative 2 , with the same changes to commercial routine management measures, but with more broad provisions for recreational routine management measures.)

- 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. (Same as Alternative 2.)
- List of frameworked "routine" management measures for the recreational fisheries would model the more broad framework for open access fisheries, so that all recreational fisheries for groundfish could be managed with bag limits, size limits, time/area closures, boat limits, hook limits, and dressing requirements.

Alternative 4 (variation [*commercial*] on either Alternative 2 or 3, with more broad provisions for commercial routine management measures.)

- 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 all groundfish species in cases where protection of an overfished or depleted stock is required.
- Recreational option could be taken from either Alternative 2 or 3.

Alternative 5 (frameworking variation) Under this option, any of the above combinations of commercial and recreational management measures could be chosen. However, this option would amend Section 6.2 of the FMP to distinguish between routine management measures that could be taken at any single Council meeting (primarily inseason changes to cumulative landings limits) and with a single *Federal Register* notice and routine management measures that could only be taken with the two-meeting-one-notice procedure used annually to set specifications and management measures. Routine management measures that would only be part of the annual specifications and management measures process and not the inseason adjustment process might include:

- Size limits for all species in recreational and commercial fisheries.
- Time/area closures for recreational and commercial fisheries.
- Setting a differential cumulative landings limit framework for limited entry fisheries.
- Boat limits, hook limits, and dressing requirements in recreational fisheries.

** The purposes of any of the Alternatives 2 - 5 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.

DISCUSSION. 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 an FMP 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 abbreviated rulemaking process. The abbreviated rulemaking process allows the Council to take certain actions that have already been classified by the FMP as "routine" 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 fishery, and may recommend adjusting management measures to either allow more access to, or to restrict harvest of, a particular species or species group.

While a framework of routine management measures allows the Council to publish annual specifications and management measures through a two-meeting process and a single *Federal Register* notice, adjusting 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, and publication of proposed and final rules. The list of routine management measures in the FMP is a reflection of federal groundfish regulations.

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 from 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 authorize 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. 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 recommend amending its list of routine management measures to include the measures that NMFS set in place under emergency authority for 2000. 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.

ISSUE 4. 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 (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.

Alternative 3 (remove one or more, but not all, of the limited entry permit gear endorsements other than the "A" endorsement from FMP). Under this alternative, one or two gear endorsements would be removed from the FMP, with the expectation that any retained gear endorsements might be reserved for future use.

Alternative 4 (regardless of whether the "B" and designated species "B" endorsements are removed, update provisional "A" endorsement without removing it). 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.

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

DISCUSSION. 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; and 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. However, the Council may also see benefit in retaining for possible future use one or more of the three currently unused 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 the initiation 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.

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. NMFS has never received applications for provisional "A" endorsed permits under this provision. 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.

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, is 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.