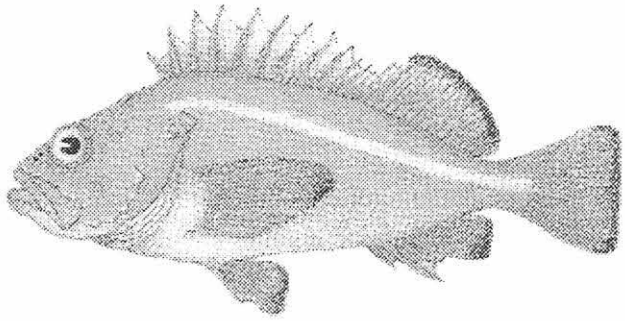
DRAFT FOR PUBLIC REVIEW

ENVIRONMENTAL ASSESSMENT/REGULATORY IMPACT REVIEW/ INITIAL REGULATORY FLEXIBILITY ANALYSIS FOR A REGULATORY AMENDMENT TO THE FISHERY MANAGEMENT PLAN FOR THE GROUNDFISH FISHERIES OF THE GULF OF ALASKA FOR FULL RETENTION OF DEMERSAL SHELF ROCKFISH IN THE FIXED GEAR FISHERIES



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EXECUTIVE SUMMARY

Total bycatch mortality of demersal shelf rockfish (DSR) in other fisheries is unknown. State and Federal fisheries managers believe a high level of unreported mortality of DSR is occurring in the directed and bycatch fisheries. Currently, the DSR MRB limits fishermen to 10 percent by weight of DSR against their halibut longline harvest. Any poundage in excess of the 10 percent limit is discarded at sea. Amending the regulations to require all DSR bycatch to be landed would enhance efforts to increase the accuracy of the accounting of total bycatch mortality of these fish.

The action proposed by the Alaska Department of Fish and Game would reduce waste and enhance estimates of total removals of demersal shelf rockfish species for stock assessment purposes: (1) without encouraging "topping off" with bycatch species and (2) decreasing waste of the resource. Additionally, the proposed action complies with four new requirements in the Sustainable Fisheries Act of 1996.

The alternatives included in this analysis are:

Alternative 1: No Action.

Alternative 2: Require full retention of DSR in the fixed gear fisheries in GOA Regulatory Area 650.

Option: Require IFQ registered buyers to accept deliveries of rockfish and Pacific cod as a condition of their permit.

1.0 INTRODUCTION

The groundfish fisheries in the Exclusive Economic Zone (EEZ) (3 to 200 miles offshore) in the Gulf of Alaska are managed under the Fishery Management Plan for the Groundfish Fisheries of the Gulf of Alaska. The Gulf of Alaska (GOA) FMP was developed by the North Pacific Fishery Management Council (Council) under the Magnuson Fishery Conservation and Management Act (Magnuson Act). It was approved by the Secretary of Commerce and become effective in 1978.

Actions taken to amend FMPs or implement other regulations governing the groundfish fisheries must meet the requirements of Federal laws and regulations. In addition to the Magnuson Act, the most important of these are the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), Executive Order (E.O.) 12866, and the Regulatory Flexibility Act (RFA).

NEPA, E.O. 12866 and the RFA require a description of the purpose and need for the proposed action as well as a description of alternative actions which may address the problem. This information is included in Section 1 of this document. Section 2 contains information on the biological and environmental impacts of the alternatives as required by NEPA. Impacts on endangered species and marine mammals are also addressed in this section. Section 3 contains a Regulatory Impact Review (RIR) which addresses the requirements of both E.O. 12866 and the RFA that economic impacts of the alternatives be considered. Section 4 contains the Initial Regulatory Flexibility Analysis (IRFA) required by the RFA which specifically addresses the impacts of the proposed action on small businesses.

This Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis (EA/RIR/IRFA) addresses the need to require full retention of demersal shelf rockfish in GOA Regulatory Area 650 to reduce waste and enhance estimates of total removals of demersal shelf rockfish species for stock assessment purposes.

1.1 Purpose of and Need for the Action

Beginning in 1996, the GOA Groundfish Plan Team identified the high level of unreported DSR mortality associated with the halibut fishery and the uncertainty in accounting for this mortality. Anecdotal information from commercial fishermen suggested that the 10% maximum retainable bycatch (MRB) limits for DSR taken during directed halibut fishing operations is inadequate and that for some trips the bycatch level may be much higher than 10%. Many fishermen do not land or report overages because they would be in violation of directed fishing standards.

An accurate accounting system is needed to account for total bycatch mortality of demersal shelf rockfish (DSR) to require fishermen fishing east of 140° W longitude to bring in all DSR landed during fishing activities. The DSR MRB limits fishermen to 10 percent by weight of DSR against their halibut longline harvest. Any poundage in excess of the 10 percent limit is discarded at sea.

Total bycatch mortality of DSR in other fisheries is unknown. If the bycatch is significantly greater than currently estimated, the directed fishery allocation may have to be reduced. However, if the true mortality is lower than currently estimated then the directed fishery allocation may be increased. Enhanced estimates of total mortality derived under the mandatory retention program would be used to improve the estimate of maximum retainable bycatch for this assemblage.

In September 1997, the Council initiated an analysis of a groundfish proposal submitted by the Alaska Department of Fish and Game to require full retention of demersal shelf rockfish in GOA Regulatory Area 650 to reduce waste and enhance estimates of total removals of the species for stock assessment purposes. The

proposed action would allow for enhanced management of DSR within its total allowable catch (TAC): (1) without encouraging "topping off" with bycatch species and (2) decreasing waste of the resource.

In October 1998, the Council approved releasing this EA/RIR to the public, with the following additions based on recommendations for its Advisory Panel. The Council directed that an option be added under Alternative 2 which would require IFQ registered buyers to accept deliveries of rockfish and Pacific cod as a condition of their permit. Additionally, the analysis should include: (a) a discussion of the procedures for the surrender of overages, and (b) a discussion of how the proceeds of the sale of forfeited fish would accrue to fisheries management, research and possible use for observer coverage in the directed DSR fishery. Items (a) and (b) are addressed in Section 3.1.2.

At that meeting, the Scientific and Statistical Committee noted that if Alternative 2 was adopted, DSR landings and bycatch may increase since it would be legal to retain DSR equivalent to more than 10% of weight of halibut or sablefish catch in the IFQ fisheries. DSR bycatch landings could increase to the point where a DSR directed fishery could be precluded. Alternatively, the proposed measure would improve total mortality estimates for DSR by accounting for a significant portion of catch that is now unrecorded. The proposed measure would reduce discard and waste.

1.2 Magnuson-Stevens Act Requirements

National Standard 9 states: "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."

The Sustainable Fisheries Act of 1996 (SFA) added many new requirements to the Magnuson-Stevens Fishery and Conservation and Management Act. Four of these requirements are pertinent to the proposed action. Section 303(a)(11) added bycatch reporting and minimization requirements to assess the amount and type of bycatch occurring in the fishery and include conservation and management measures that, to the extent practicable, minimize bycatch. Section 313(f) requires the reduction of economic discards for a period of not less than four years. Section 313(h) added a requirement to ensure total catch measurement in each fishery under Council jurisdiction that will ensure the accurate enumeration, at a minimum, of target species, economic discards, and regulatory discards. Section 313(i) full retention by fishing vessels and full utilization by fish processors of economic discards in fisheries if such discards cannot be avoided.

1.3 Management Background

Common name	Scientific Name
canary rockfish	*Sebastes pinniger*
China rockfish	*S. nebulosus*
copper rockfish	*S. caurinus*
quillback rockfish	*S. maliger*
rosethorn rockfish	*S. helvomaculatus*
tiger rockfish	*S. nigrocinctus*
yelloweye rockfish	*S. ruberrimus*

Prior to 1987, Demersal Shelf Rockfishes (DSR) were grouped with the "Other Rockfish" complex in the GOA Fishery Management Plan (FMP). In 1987, the "Other Rockfish" complex was split into three components for management purposes in the eastern Gulf. The DSR assemblage is now comprised of seven species of nearshore, bottom-dwelling rockfishes listed below. Yelloweye rockfish (*Sebastes ruberrimus*) is the dominant species in the fishery. Prior to 1992, DSR was recognized as an FMP assemblage only in the waters east of 137°W. longitude.

In 1992, DSR was recognized in the East Yakutat Section (EYKT) and management of DSR was extended westward to 140° W. longitude. This area is referred to as the Southeast Outside (SEO) Subdistrict and is comprised of four management sections: East Yakutat (EYKT), Northern Southeast Outside (NSEO), Central

Southeast Outside (CSEO) and Southern Southeast Outside (SSEO) (Figure 1). In SEO, DSR are managed jointly by the State of Alaska and the National Marine Fisheries Service.

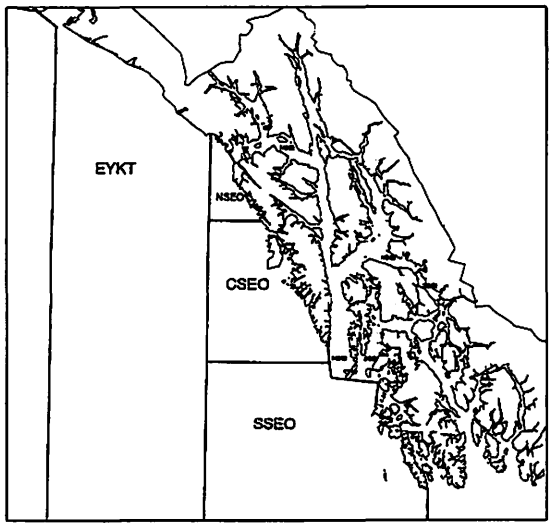

Figure 1. Eastern Gulf Regulatory Area.

The history of domestic landings of DSR from SEO is shown in Table 1. The directed DSR catch in SEO increased from 106 mt in 1982 to a peak of 803 mt in 1987. Total landings exceeded 900 mt in 1993. Directed fishery landings have been constrained by other fishery management actions. In 1991 the GOA was closed to all longlining on July 8 when the prohibited species cap of halibut was reached. Since 1992, there has been a separate PSC for the DSR fishery. In 1993 the fall directed fishery was canceled due to an unanticipated increase in DSR bycatch during the fall halibut fishery. Since 1995, the halibut fishery has been managed under an individual fishing quota (IFQ) program.

DSR mortality during the halibut longline fishery continues to account for a significant portion of the total allowable catch (TAC). Estimated unreported mortality has ranged between 130 mt to 355 mt annually. Prior to the IFQ fishery, ADF&G had estimated unreported mortality of DSR during the halibut fishery based on IPHC interview data. The 1993 interview data indicates a total mortality of DSR of 13% of the June halibut landings (by weight) and 18% of the September halibut landings. Unreported mortality data has been more difficult to collect under the halibut IFQ fishery and appears to be less reliable than previous data. The allowable bycatch limit of DSR during halibut fishing is 10% of the halibut weight. Based on past landing data, it is estimated that approximately half of the 2C halibut quota and 1% of the 3A halibut quota are taken in SEO. Total bycatch is estimated using a 10% bycatch mortality for DSR in 2C and a 7% bycatch mortality in 3A. Estimated unreported mortality is the difference between the total and the reported bycatch. Based on the 1997 halibut quotas, the estimated DSR mortality for 1998 is anticipated to be 300 mt.

On a season-wide basis the total bycatch of DSR during the halibut fishery may only be 10%. However, on an individual trip basis the bycatch of DSR varies greatly. Halibut and yelloweye overlap in their distributions to varying degrees during the IFQ season. Depth, time of year, and habitat all influence the bycatch rate of DSR. Less easy to predict is the occurrence of yelloweye associated with patchy prey distribution. Fishermen have reported high catch rates of yelloweye in sets over mud bottom where the incidence of yelloweye is expected to be minimal. Therefore, even when fishermen intend to minimize DSR bycatch, there may be significant catches taken. Recently a fisherman made a directed halibut trip off Baranof Island. He landed 24,000 pounds of halibut and 7,800 pounds of yelloweye rockfish, far in excess of the 2,400 pounds allowed under directed fishing standards. This amount of DSR also exceeds the trip limit for DSR in the Southeast subdistrict. The fisherman said he had made an effort to move to other substrate over the course of his trip and that he caught as many yelloweye in his soft bottom sets as he did on the hard bottom sets. His logbook data substantiate these remarks. He said he refuses to throw rockfish overboard and feels it is unfair to be penalized for bringing in this catch.

Rockfish have a physoclistic, or closed, swim bladder. They are not capable of quickly adjusting to depth changes and therefore suffer embolism mortality when brought to the surface from depth. Most rockfish taken in the course of longline fishing are fatally injured. Therefore release of fish in excess of bycatch allowances results in waste of this resource.

The majority of the Eastern Gulf longline fleet are under 60 ft and therefore, unobserved. Although logbooks are required, accurate weights, by species, for discards at sea are not possible. Given that most rockfish discarded are dead, the true mortality of DSR is not accurately accounted. Fishermen, worried that they will be cited for overages, often do not bring in bycatch in excess of their allowable catch and in fact, current law prohibits retention beyond the 10% level. NOAA Enforcement staff, recognizing that rockfish are unlikely to survive discard at sea, currently allows voluntary forfeiture of rockfish in excess of the overfishing definitions as long as: 1) the forfeited species is not on prohibited species status or 2) the overage does not exceed 100% over the allowable bycatch or 1,000 pounds, which ever is in the fisherman's favor. The processor accepting the delivery is allowed to sell the rockfish and the fish is listed on the fish ticket as a forfeiture and a check for the revenue for this sale going to either NMFS or the State of Alaska, depending on the jurisdiction of the overage. The State of Alaska fishticket system captures these forfeitures as harvest code "18."

Table 2 lists the DSR forfeitures for the directed DSR fishery, the halibut fishery, and other groundfish fisheries for the SEO district for 1996 and 1997. It must be emphasized that the reported overages in the fishticket system reflect only a small portion of the total bycatch mortality due to under-reporting of discards.

Table 2. Demersal shelf rockfish landed and confiscated in various fisheries in 1996 and 1997. (Source: ADF&G fish ticket data (in round lb.)

Year	Fishery	# lb	# Vessels	# Landings
1996	Directed DSR	3,078	13	15
1996	Directed Halibut	4,107	66	92
1996	Other*	3,009	16	21
	TOTAL	10,194	95	128
1997	Directed DSR	3,880	26	32
1997	Directed Halibut	9,182	81	119
1997	Other*	307	7	7
	TOTAL	13,369	114	158

*miscellaneous finfish and directed lingcod fisheries.

Although the current management plan for DSR attempts to account for total mortality of DSR and set directed fishing levels after accounting for this bycatch the true bycatch mortality of DSR is unknown. In 1998 the overfishing level for DSR was 940 mt and the TAC was set at 560 mt. The directed fishery quotas were set for the 4 ADF&G management areas in Southeast Outside after subtracting the 300 mt estimated to be taken incidental to the halibut fishery. The total directed fishery quota for SEO for 1998 was 260 mt.

The overfishing level for DSR is sufficiently higher than the TAC that it is unlikely that the overfishing level would be reached under full retention, even if the true total mortality was higher than estimated. In years of high halibut catch it is possible that bycatch in the halibut fishery would preempt the directed fishery. Conversely, it may be possible to increase the directed fishery TAC if it becomes apparent that we have over-allocated TAC to bycatch needs.

1.4 Alternatives Considered

1.4.1 Alternative 1: No Action.

The status quo alternative would allow the current wastage of DSR bycatch that exceeds the maximum retainable bycatch rates for this species complex to continue.

1.4.2 Alternative 2: Require full retention of DSR in the fixed gear fisheries in GOA Regulatory Area 650.

Alternative 2 would allow full retention of DSR east of 140° W longitude. Fishermen would be required to retain all their DSR bycatch. They would be allowed to sell up to the 10% maximum retainable bycatch amount (round weight equivalent of their target species weight). The remainder of the fish would be voluntarily relinquished to NMFS or ADF&G. Proceeds of the sale of forfeited fish would accrue to fisheries management and research.

Alternative 2 would serve a conservation need to reduce waste of the DSR resource. ADF&G managers are likely underestimating DSR mortality in the fixed gear fisheries, but the amount of underestimation is unknown. The inaccuracy of mortality estimated may or may not result in additional DSR available to the directed fishery.

Option: Require IFQ registered buyers to accept deliveries of rockfish and Pacific cod as a condition of their permit.

The Council added an option to require retention of DSR and Pacific cod by IFQ buyers at the October meeting. This requirement would only affect the bycatch in the IFQ fisheries. The retention requirement would need to be extended to shoreside processors to affect all fixed gear fisheries. NMFS has provided the following rationale rejecting this option as a viable management action.

December 1, 1989 memorandum from the NOAA Office of General Counsel to the Council summarized the Council's authority to prohibit roe-stripping and increase retention and utilization of pollock. These arguments have also been utilized for guiding the Council in implementation of the IR/IU program and follow consistently regarding DSR retention.

Because of the desire to more effectively manage the DSR resource, it has been proposed that full retention of DSR above the MRB level be required. Requiring full retention of fish by fishermen is a legitimate action that is consistent with managing "fishing" and is consistent with the paramount purpose of the Magnuson-Stevens Act, to conserve a stock of fish. The Act also requires "conservation and management" of the natural resource. Requiring full retention of DSR by fishermen could result in a more accurate understanding of DSR mortality and would likely improve management of the resource and is therefore consistent.

There is authority under the Magnuson-Stevens Act to limit wasteful practices. Controlling wasteful practices is a legitimate action. Applying a no-discard rule (i.e., full retention) to harvesters raises no legal problems of authority under the Act. There is authority to limit wasteful practices involved with fishing and authority to limit wasteful practices by requiring at-sea-processors to retain and utilize fish flesh.

There is no authority to limit wasteful practices by regulating on-shore processors, because on-shore processors can be regulated only indirectly as an incidence of managing "fishing." For example, there is authority under the Act to require that on-shore processors produce reports that help manage the fishery, but there is no authority in requiring on-shore processors to buy or process fish. Therefore any regulations requiring on-shore processors to buy fish, would have to be developed and implemented by the State. This has been the approach with two former actions involving roe stripping and IR/IU, where the State has implemented regulations concerning on-shore components.

To conclude, NMFS could require a no-discard rule for fishermen and processing by at-sea-processors, but has no authority to regulate on-shore processors with regard to purchasing fish and setting prices paid for such fish. This action would be appropriate for the State to consider. The Council could make this recommendation to the Joint Board of Fisheries/Council committee for discussion at their January 1999 meeting.

2.0 NEPA REQUIREMENTS: ENVIRONMENTAL IMPACTS OF THE ALTERNATIVES

An environmental assessment (EA) is required by the National Environmental Policy Act of 1969 (NEPA) to determine whether the action considered will result in significant impact on the human environment. If the action is determined not to be significant based on an analysis of relevant considerations, the EA and resulting finding of no significant impact (FONSI) would be the final environmental documents required by NEPA. An environmental impact statement (EIS) must be prepared for major Federal actions significantly affecting the human environment.

An EA must include a brief discussion of the need for the proposal, the alternatives considered, the environmental impacts of the proposed action and the alternatives, and a list of document preparers. The purpose and alternatives were discussed in Sections 1.1 and 1.2, and the list of preparers is in Section 8. This section contains the discussion of the environmental impacts of the alternatives including impacts on threatened and endangered species and marine mammals.

2.1 Environmental Impacts of the Alternatives

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

A summary of the effects of the annual groundfish harvests on the biological environment and associated impacts on marine mammals, seabirds, and other threatened or endangered species are discussed in the final environmental assessment for the annual groundfish total allowable catch specifications (NMFS 1998).

2.2 Impacts on Endangered or Threatened Species

Background. The ESA provides for the conservation of endangered and threatened species of fish, wildlife, and plants. The program is administered jointly by NMFS for most marine species, and the US Fish and Wildlife Service (FWS) for terrestrial and freshwater species.

The ESA procedure for identifying or listing imperiled species involves a two-tiered process, classifying species as either threatened or endangered, based on the biological health of a species. Threatened species are those likely to become endangered in the foreseeable future [16 U.S.C. §1532(20)]. Endangered species are those in danger of becoming extinct throughout all or a significant portion of their range [16 U.S.C. §1532(20)]. The Secretary of Commerce, acting through NMFS, is authorized to list marine mammal and fish species. The Secretary of the Interior, acting through the FWS, is authorized to list all other organisms.

In addition to listing species under the ESA, the critical habitat of a newly listed species must be designated concurrent with its listing to the " maximum extent prudent and determinable" [16 U.S.C. §1533(b)(1)(A)]. The ESA defines critical habitat as those specific areas that are essential to the conservation of a listed species and that may be in need of special consideration. The primary benefit of critical habitat designation is that it informs Federal agencies that listed species are dependent upon these areas for their continued existence, and that consultation with NMFS on any Federal action that may affect these areas is required. Some species, primarily the cetaceans, listed in 1969 under the Endangered Species Conservation Act and carried forward as endangered under the ESA, have not received critical habitat designations.

Listed Species. The following species are currently listed as endangered or threatened under the ESA and occur in the GOA and/or BSAI:

Endangered	
Northern Right Whale	*Balaena glacialis*
Bowhead Whale[1]	*Balaena mysticetus*
Sei Whale	*Balaenoptera borealis*
Blue Whale	*Balaenoptera musculus*
Fin Whale	*Balaenoptera physalus*
Humpback Whale	*Megaptera novaeangliae*
Sperm Whale	*Physeter macrocephalus*
Snake River Sockeye Salmon	*Oncorhynchus nerka*
Short-tailed Albatross	*Diomedia albatrus*
Steller Sea Lion[2]	*Eumetopias jubatus*
Threatened	
Snake River Fall Chinook Salmon	*Oncorhynchus tshawytscha*
Snake River Spring/Summer Chinook Salmon	*Oncorhynchus tshawytscha*
Steller Sea Lion[3]	*Eumetopias jubatus*
Spectacled Eider	*Somateria fishcheri*

Section 7 Consultations. Because both groundfish fisheries are federally regulated activities, any negative affects of the fisheries on listed species or critical habitat and any takings[4] that may occur are subject to ESA section 7 consultation. NMFS initiates the consultation and the resulting biological opinions are issued to NMFS. The Council may be invited to participate in the compilation, review, and analysis of data used in the consultations. The determination of whether the action "is likely to jeopardize the continued existence of" endangered or threatened species or to result in the destruction or modification of critical habitat, however, is the responsibility of the appropriate agency (NMFS or FWS). If the action is determined to result in jeopardy, the opinion includes reasonable and prudent measures that are necessary to alter the action so that jeopardy is avoided. If an incidental take of a listed species is expected to occur under normal promulgation of the action, an incidental take statement is appended to the biological opinion.

Section 7 consultations have been done for all the above listed species, some individually and some as groups. Below are summaries of the consultations.

Endangered Cetaceans. NMFS concluded a formal section 7 consultation on the effects of the BSAI and GOA groundfish fisheries on endangered cetaceans within the BSAI and GOA on December 14, 1979, and April 19, 1991, respectively. These opinions concluded that the fisheries are unlikely to jeopardize the continued existence or recovery of endangered whales. Consideration of the bowhead whale as one of the listed species present within the area of the Bering Sea fishery was not recognized in the 1979 opinion, however, its range and status are not known to have changed. No new information exists that would cause NMFS to alter the conclusion of the 1979 or 1991 opinions. NMFS has no plan to reopen Section 7 consultations on the listed cetaceans for this action. Of note, however, are observations of Northern Right Whales during Bering Sea stock assessment cruises in the

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[1]species is present in Bering Sea area only.
[2]listed as endangered west of Cape Suckling.
[3]listed as threatened east of Cape Suckling.
[4] the term "take" under the ESA means "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct" (16 U.S.C. §1538(a)(1)(B).

summer of 1997 (NMFS per. com). Prior to these sightings, and one observation of a group of two whales in 1996, confirmed sightings had not occurred.

Steller sea lion. The Steller sea lion range extends from California and associated waters to Alaska, including the Gulf of Alaska and Aleutian Islands, and into the Bering Sea and North Pacific and into Russian waters and territory. In 1997, based on biological information collected since the species was listed as threatened in 1990 (60 FR 51968), NMFS reclassified Steller sea lions as two distinct population segments under the ESA (62 FR 24345). The Steller sea lion population segment west of 144 W. longitude (a line near Cape Suckling, Alaska) is listed as endangered; the remainder of the U.S. Steller sea lion population remains listed as threatened.

NMFS designated critical habitat in 1993 (58 FR 45278) for the Steller sea lion based on the Recovery Team's determination of habitat sites essential to reproduction, rest, refuge, and feeding. Listed critical habitats in Alaska include all rookeries, major haul-outs, and specific aquatic foraging habitats of the BSAI and GOA. The designation does not place any additional restrictions on human activities within designated areas. No changes in critical habitat designation were made as result of the 1997 re-listing.

Beginning in 1990 when Steller sea lions were first listed under the ESA, NMFS determined that both groundfish fisheries may adversely affect Steller sea lions, and therefore conducted Section 7 consultation on the overall fisheries (NMFS 1991), and subsequent changes in the fisheries (NMFS 1992). The biological opinion on the BSAI and GOA fisheries effects on Steller sea lions issued by NMFS on January 26, 1996 concluded that these fisheries and harvest levels are unlikely to jeopardize the continued existence and recovery of the Steller sea lion or adversely modify critical habitat. NMFS conducted an informal Section 7 consultation on Steller sea lions for this action in 1997 and concluded that the GOA groundfish fishery and the 1997 TAC amounts were not likely to affect Steller sea lions in a way or to an extent not already considered in previous Section 7 consultations (NMFS, January 17, 1997). Reinitiation of formal consultation was not required at that time. NMFS has reopened formal consultation on the 1998 fishery to evaluate new information specific to the 60 percent increase of pollock TAC in the combined W/C Regulatory Area. The 1998 biological opinion concluded that the 1998 fishery was not likely to jeopardize the continued existence and recovery of Steller sea lions or to adversely modify critical habitat.

Pacific Salmon. No species of Pacific salmon originating from freshwater habitat in Alaska are listed under the ESA. These listed species originate in freshwater habitat in the headwaters of the Columbia (Snake) River. During ocean migration to the Pacific marine waters a small (undetermined) portion of the stock extend into the Gulf of Alaska as far east as the Aleutian Islands. In that habitat they are mixed with hundreds to thousands of other stocks originating from the Columbia River, British Columbia, Alaska, and Asia. The listed fish are not visually distinguishable from the other, unlisted, stocks. Mortal take of them in the chinook salmon bycatch portion of the fisheries is assumed based on sketchy information on abundance, timing, and migration patterns.

NMFS designated critical habitat in 1992 (57 FR 57051) for the for the Snake River sockeye, Snake River spring/summer chinook, and Snake River fall chinook salmon. The designations did not include any marine waters, therefore, does not include any of the habitat where the groundfish fisheries are promulgated.

NMFS has issued two biological opinions and no-jeopardy determinations for listed Pacific salmon in the Alaska groundfish fisheries (NMFS 1994, NMFS 1995). Conservation measures were recommended to reduce salmon bycatch and improve the level of information about the salmon bycatch. The no jeopardy determination was based on the assumption that if total salmon bycatch is controlled, the impacts to listed salmon are also controlled. The incidental take statement appended to the second biological opinion allowed for take of one Snake River fall chinook and zero take of either Snake River spring/summer chinook or Snake River sockeye, per year. As explained above, it is not technically possible to know if any have been taken. Compliance with the

biological opinion is stated in terms of limiting salmon bycatch per year to under 55,000 and 40,000 for chinook salmon, and 200 and 100 sockeye salmon in the BSAI and GOA fisheries, respectively.

Short-tailed albatross. The entire world population in 1995 was estimated as 800 birds; 350 adults breed on two small islands near Japan (H. Hasegawa, per. com.). The population is growing but is still critically endangered because of its small size and restricted breeding range. Past observations indicate that older short-tailed albatrosses are present in Alaska primarily during the summer and fall months along the shelf break from the Alaska Peninsula to the GOA, although 1- and 2-year old juveniles may be present at other times of the year (FWS 1993). Consequently, these albatrosses generally would be exposed to fishery interactions most often during the summer and fall--during the latter part of the second and the whole of the third fishing quarters.

Short-tailed albatrosses reported caught in the longline fishery include two in 1995, one in October 1996, and none in 1997. Both 1995 birds were caught in the vicinity of Unimak Pass and were taken outside the observers' statistical samples.

Formal consultation on the effects of the groundfish fisheries on the short-tailed albatross under the jurisdiction of the FWS concluded that BSAI and GOA groundfish fisheries would adversely affect the short-tailed albatross and would result in the incidental take of up to two birds per year, but would not jeopardize the continued existence of that species (FWS 1989). Subsequent consultations for changes to the fishery that might affect the short-tailed albatross also concluded no jeopardy (FWS 1995, FWS 1997). The US Fish and Wildlife Service does not intend to renew consultation for this action.

Spectacled Eider. These sea ducks feed on benthic mollusks and crustaceans taken in shallow marine waters or on pelagic crustaceans. The marine range for spectacled eider is not known, although Dau and Kitchinski (1977) review evidence that they winter near the pack ice in the northern Bering Sea. Spectacled eider are rarely seen in U.S. waters except in August through September when they molt in northeast Norton Sound and in migration near St. Lawrence Island. The lack of observations in U.S. waters suggests that, if not confined to sea ice polyneas, they likely winter near the Russian coast (FWS 1993). Although the species is noted as occurring in the GOA and BSAI management areas, no evidence exists that they interact with these groundfish fisheries.

Conditions for Re-initiation of Consultation. For all ESA listed species, consultation must be reinitiated if: the amount or extent of taking specified in the Incidental Take Statement is exceeded, new information reveals effects of the action that may affect listed species in a way not previously considered, the action is subsequently modified in a manner that causes an effect to listed species that was not considered in the biological opinion, or a new species is listed or critical habitat is designated that may be affected by the action.

2.3 Impacts on Marine Mammals Not Listed Under the ESA

Marine mammals not listed under the ESA that may be present in the GOA and BSAI include cetaceans, [minke whale (*Balaenoptera acutorostrata*), killer whale (*Orcinus orca*), Dall's porpoise *(Phocoenoides dalli*), harbor porpoise (*Phocoena phocoena*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), and the beaked whales (e.g., *Berardius bairdii* and *Mesoplodon spp.*)] as well as pinnipeds [northern fur seals (*Callorhinus ursinus*), and Pacific harbor seals (*Phoca vitulina*)] and the sea otter (*Enhydra lutris*).

None of the alternatives will affect takes of other marine mammals not listed under the ESA. Therefore, none of the alternatives are expected to have a significant impact on marine mammals not listed under the ESA.

2.4 Coastal Zone Management Act

Implementation of each of the alternatives would be conducted in a manner consistent, to the maximum extent practicable, with the Alaska Coastal Management Program within the meaning of Section 30(c)(1) of the Coastal Zone Management Act of 1972 and its implementing regulations.

2.5 Conclusions or Finding of No Significant Impact

The alternatives address the retention of DSR in the bycatch fisheries to reduce waste and enhance assessment of the resource. Neither alternative impact total mortality of the DSR resource. Therefore, none of the alternatives are likely to significantly affect the quality of the human environment, and the preparation of an environmental impact statement for the proposed action is not required by Section 102(2)(C) of the National Environmental Policy Act or its implementing regulations.

_____ _____

Assistant Administrator for Fisheries, NOAA Date

3.0 REGULATORY IMPACT REVIEW: ECONOMIC AND SOCIOECONOMIC IMPACTS OF THE ALTERNATIVES

This section examines the Gulf of Alaska demersal shelf rockfish directed and bycatch fisheries. It provides information about the economic and socioeconomic impacts of the alternatives including identification of the individuals or groups that may be affected by the action, the nature of these impacts, quantification of the economic impacts if possible, and discussion of the trade offs between qualitative and quantitative benefits and costs.

The requirements for all regulatory actions specified in E.O. 12866 are summarized in the following statement from the order:

> In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environment, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.

This section also addresses the requirements of both E.O. 12866 and the Regulatory Flexibility Act to provide adequate information to determine whether an action is "significant" under E.O. 12866 or will result in "significant" impacts on small entities under the RFA.

E. O. 12866 requires that the Office of Management and Budget review proposed regulatory programs that are considered to be "significant." A "significant regulatory action" is one that is likely to:

> (1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
>
> (2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
>
> (3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
>
> (4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

A regulatory program is "economically significant" if it is likely to result in the effects described above. The RIR is designed to provide information to determine whether the proposed regulation is likely to be "economically significant."

3.1 Alternatives to be considered

At its September 1997 meeting, the Council decided to initiate an analysis to require full retention of DSR when caught as bycatch in the halibut and sablefish IFQ fisheries. During initial review in October 1998, the Council modified the list of alternatives.

3.1.1 Alternative 1: Status Quo.

The status quo alternative would retain the current wastage of DSR bycatch that exceeds the maximum retainable bycatch rates for this species complex. Managers would not have the opportunity to collect valuable data needed to enhance management of the DSR assemblage.

3.1.2 Alternative 2: Require full retention of DSR in the fixed gear fisheries in GOA Regulatory Area 650.

Option: Require IFQ registered buyers to accept deliveries of rockfish and Pacific cod as a condition of their permit.

Alternative 2 would allow full retention of DSR east of 140° W longitude. Fishermen would be required to retain all their DSR bycatch. They would be allowed to sell up to the 10% maximum retainable bycatch amount (round weight equivalent of their target species weight). The remainder of the fish would be voluntarily relinquished to NMFS or ADF&G. Proceeds of the sale of forfeited fish would accrue to fisheries management and research.

Currently the voluntary forfeiture program works as follows: NMFS and State of Alaska Fish and Wildlife Protection (FWP) both have thresholds under which they allow voluntary forfeiture of product. The processors are aware of these limits and designate the forfeiture amount under code 18 on the original fish ticket or as code 18 on a separate fish ticket. A check for the amount of the forfeiture is made out to the State of Alaska when fish are surrendered to the State. These checks have been deposited in an ADF&G commercial fisheries account and used directly by the regional groundfish project for research and management. FWP retains the check only in cases that are above the voluntary forfeiture threshold and result in prosecution.

For example, overage checks from the Chatham Strait sablefish fishery have been used by the ADF&G Region I groundfish project directly for research and management of this sablefish fishery. A budget request is submitted at the beginning of the fiscal year outlining anticipated expenditures. If Alternative 2 is implemented, a similar budget program could be set up for DSR overage checks which would be earmarked for DSR research and management. For example, this fund could pay for sea duty expenses of ADF&G employees to increase observer coverage of the DSR fishery, increased biological sampling of commercial landings, and additional vessel days for the DSR stock assessment surveys. It should be noted that most vessels in the applicable fisheries with DSR bycatch are too small in size to take observers.

Table 2 lists the number of vessels affected by the proposed action and corresponding pounds of forfeited DSR in Area 650 in 1996 and 1997. Approximately 95 vessels in DSR target, halibut bycatch, and other bycatch fisheries made 128 landings totaling a reported 10,000 lb of DSR forfeitures in 1996. In 1997, 114 vessels made 158 DSR landings of nearly 13,400 lb of forfeitures. In 1997, NMFS Enforcement did not ticket fishermen who voluntarily forfeited excess DSR. The increase in vessels and landings may be a result of NMFS Enforcement not penalizing forfeitures in 1997.

The ex-vessel price for DSR landed in the directed fishery in 1997 was $1.34 per round weight pound. The price in the bycatch fishery was lower, at an average of $0.52 per pound for deliveries in CSEO, SSEO, NSEO, and EYKT. The ex-vessel value of the 1997 directed DSR fishery was approximately $827,000. The DSR bycatch fishery was worth approximately $115,000.

It is expected that under Alternative 2, where forfeitures would be permitted with no penalties by regulation, additional fishermen may comply and forfeited DSR may continue to increase. An accurate estimate of total removals is important in managing this rockfish complex. Changing the regulations under Alternative 2 would create conformity between the regulations and current enforcement practice, further encouraging accurate reporting and a decrease in wastage of the DSR resource.

Public testimony reported that buyers in some ports did not pay the referenced ex-vessel price or would not purchase DSR at all. A Sitka fisherman responded that there was a latent market for DSR in Sitka, and most buyers readily purchased DSR.

NMFS has opined that as with the IR/IU program, it does not have the authority to require shoreside processors to purchase fish from fishermen or require buyers to purchase fish at a particular price (see Section 1.4.2). This action would be appropriate for the State to consider. The Council could make this recommendation to the Joint Board of Fisheries/Council committee for discussion at their January 1999 meeting.

3.2 Administrative, Enforcement and Information Costs

Additional administrative and enforcement monitoring is expected under Alternative 2 to track those rockfish landings in excess of the MRB for DSR species and which is forfeited. Some forfeitures will be made to the State of Alaska, while others will be forfeited to the NMFS. Processors will be required under this alternative to monitor and make forfeiture payments on behalf of affected fishermen. This program is currently underway under voluntary compliance. This program would be mandatory under Alternative 2 and expanded to all processors and fishermen in Area 650. Alternative 2 would remove inconsistencies in the regulations and simplify both enforcement, management and the commercial fisheries for these species.

4.0 INITIAL REGULATORY FLEXIBILITY ANALYSIS

The objective of the Regulatory Flexibility Act is to require consideration of the capacity of those affected by regulations to bear the direct and indirect costs of regulation. If an action will have a significant impact on a substantial number of small entities an Initial Regulatory Flexibility Analysis (IRFA) must be prepared to identify the need for the action, alternatives, potential costs and benefits of the action, the distribution of these impacts, and a determination of net benefits.

NMFS has defined all fish-harvesting or hatchery businesses that are independently owned and operated, not dominant in their field of operation, with annual receipts not in excess of $2,000,000 as small businesses. In addition, seafood processors with 500 employees or fewer, wholesale industry members with 100 employees or fewer, not-for-profit enterprises, and government jurisdictions with a population of 50,000 or less are considered small entities. A "substantial number" of small entities would generally be 20% of the total universe of small entities affected by the regulation. A regulation would have a "significant impact" on these small entities if it reduced annual gross revenues by more than 5 percent, increased total costs of production by more than 5 percent, or resulted in compliance costs for small entities that are at least 10 percent higher than compliance costs as a percent of sales for large entities.

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

> (1) a description and estimate of the number of small entities and total number of entities in a particular affected sector, and total number of small entities affected; and
>
> (2) analysis of economic impact on small entities, including direct and indirect compliance costs, burden of completing paperwork or recordkeeping requirements, effect on the competitive position of small entities, effect on the small entity's cash flow and liquidity, and ability of small entities to remain in the market.

4.1 Economic Impact on Small Entities

Approximately 100 permit owners showing landings in the DSR target fishery may be affected by the proposed action to require retention of all DSR species harvested in the halibut and sablefish IFQ fisheries in Area 650. These vessels forfeited 10,000 lb of DSR in 1996, and 14,000 lb in 1997. The 1996 and 1997 TACs for DSR in SEO were 950 mt each year (2,093,800 lb). Additionally, 459 halibut QS owners and 146 other groundfish (primarily sablefish) permittees landed DSR as bycatch. As under other mandatory retention programs (e.g., IR/IU), fishermen may bear the extra costs of handling unprofitable fish.

In 1996, the most recent year for which vessel participation data is available, 1,508 vessels participated in the groundfish fisheries of the GOA; 1,254 longline vessels, 148 pot vessels, and 202 trawl vessels. There were 439 vessels operating in the BSAI in 1996; 158 longline vessels, 103 pot vessels, and 192 trawl vessels. The commercial groundfish catch off Alaska totaled 2.05 million mt in 1996, with an ex-vessel value of $538 million. The value of the catch after primary processing was estimated at $1.23 billion.

Because the number of vessels and size of the landings, compared with the total number of groundfish fleet and landings are not considered substantial, nor would they meet the criteria of "significant impact," none of the alternatives is expected to result in a "significant regulatory action" as defined in E.O. 12866.

The FRFA will be completed by NMFS after opportunity for public comment on the proposed rule and IRFA.

5.0 SUMMARY AND CONCLUSIONS

Total bycatch mortality of demersal shelf rockfish (DSR) in other fisheries is unknown. State and Federal fisheries managers believe a high level of unreported mortality of DSR is occurring in the directed and bycatch fisheries. Currently, the DSR MRB limits fishermen to 10 percent by weight of DSR against their halibut longline harvest. Any poundage in excess of the 10 percent limit is discarded at sea. Amending the regulations to require all DSR bycatch to be landed would enhance efforts to increase the accuracy of the accounting of total bycatch mortality of these fish.

The action proposed by the Alaska Department of Fish and Game would reduce waste and enhance estimates of total removals of demersal shelf rockfish species for stock assessment purposes: (1) without encouraging "topping off" with bycatch species and (2) decreasing waste of the resource. Additionally, the proposed action complies with four new requirements in the Sustainable Fisheries Act of 1996.

None of the alternatives are likely to significantly affect the quality of the human environment.

None of the alternatives is expected to result in a "significant regulatory action" as defined in E.O. 12866. However, the FRFA will be completed by NMFS after opportunity for public comment on the proposed rule and IRFA.

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International Pacific Halibut Commission

Introduction

At its October 1997 meeting, the Council approved two actions affecting management of the halibut guided sport fishery, culminating more than four years of discussion, debate, public testimony, and analysis.

1. Recordkeeping and reporting requirements. In 1997, the Council approved recording and reporting requirements for the halibut sport charter fishery operating in Alaska. To comply with this requirement, the Alaska Department of Fish and Game, Sport Fish Division, under the authority of the Alaska Board of Fisheries, implemented a Saltwater Sportfishing Charter Vessel Logbook in 1998. Information collected under this program includes: fish landed and/or released, date of landing, location of fishing, hours fished, number of clients, residence information, number of rods fished, ownership of the vessel, and the identity of the operator.

2. Guideline Harvest Levels (GHL) in IPHC Areas 2C and 3A. The Council adopted GHLs for the halibut guided sport (charter) fishery in International Pacific Halibut Commission (IPHC) Regulatory Areas 2C and 3A. A GHL was not set in any IPHC area west of 3A. Under this action, the Council stated its intent to manage the guided sport fishery to not exceed 12.76% of the combined commercial and guided sport halibut quota in area 2C, and 15.61% in Area 3A. The GHL rates were based on the guided sport fleet receiving 125% of their 1995 catch. In taking this action, the Council stated its intent that the guideline harvest levels would not shut the fishery down, but instead would be used as a gauge to trigger other management measures in years following attainment of that harvest level. The Council intends that the halibut charterboat industry will be managed to maintain a stable charter season of historic length, using statewide and zone specific measures. When end-of-season catch data indicate that the guided sport industry will likely reach or exceed the GHL in the following season, NMFS would implement the pre-approved measures to slow down guided sport halibut harvest. Based on the Council analysis (NPFMC 1997), this approach is not expected to come into play for several years. Management measures will be developed by the Council in cooperation with the Alaska Board of Fisheries (BOF), the charter industry, and other members of the public.

In addition to the specific actions outlined above, the Council also adopted a framework for developing local area management plans (LAMPs) using the joint Council/BOF protocol. Local area plans would be submitted through the BOF proposal cycle, but portions of the plans pertaining to halibut would ultimately require Council approval for implementation. Lastly, the Council scheduled a review of halibut charterboat management for October 2000.

Purpose and Need for Action

At its December 1997 meeting, NMFS notified the Council that implementation of the GHL without accompanying regulations was problematic and, therefore, could not be submitted to the Secretary at that time. Instead, the NMFS published the Council's intent of managing the halibut charter fishery under a GHL as a notice of inquiry in the Federal Register on March 10, 1998. NMFS recommended that the Council develop possible management alternatives for analysis that would be triggered by the GHL. The Council announced the formation of a GHL Committee to recommend possible management measures that would keep the halibut charter fleet under the GHL. The committee met twice in early 1998 to develop management alternatives for the Council to consider. The committee will convene in late September 1998 to provide comments to the Council on this discussion paper.

In April 1998, the Council initiated a regulatory amendment to analyze a suite of management alternatives to manage the halibut charter industry to maintain the fleet below the GHL. The alternatives will be analyzed to determine their effectiveness under a GHL in addressing the following problems identified by the Council.

PROBLEM STATEMENT

The recent expansion of the halibut charter industry, including outfitters and lodges, may make achievement of Magnuson Act National Standards more difficult. Of concern is the Council's ability to maintain the stability, economic viability, and diversity of the halibut industry, the quality of the recreational experience, the access of subsistence users, and the socioeconomic well-being of the coastal communities dependent on the halibut resource. Specifically, the Council notes the following areas of concern with respect to the recent growth of halibut charter operations, lodges and outfitters:

1. Pressure by charter operations, lodges and outfitters may be contributing to localized depletion in several areas.
2. The recent growth of charter operations, lodges and outfitters may be contributing to overcrowding of productive grounds and declining catches for historic sport and subsistence fishermen in some areas.
3. As there is currently no limit on the annual harvest of halibut by charter operations, lodges, and outfitters, an open-ended reallocation from the commercial fishery to the charter industry is occurring. This reallocation may increase if the projected growth of the charter industry occurs. The economic and social impact on the commercial fleet of this open-ended reallocation may be substantial and could be magnified by the IFQ program.
4. In some areas, community stability may be affected as traditional sport, subsistence, and commercial fishermen are displaced by charter operators, lodges, and outfitters. The uncertainty associated with the present situation and the conflicts that are occurring between the various user groups may also be impacting community stability.
5. Information is lacking on the socioeconomic composition of the current charter industry. Information is needed that tracks: (1) the effort and catch of individual charter operations, lodges, and outfitters; and (2) changes in business patterns.
6. The need for reliable catch data will increase as the magnitude of harvest expands in the charter sector.

This discussion paper is an interim step to further clarify Council intent for management and any regulatory impediments with the management alternatives approved for analysis. The current Council schedule for development of the regulatory amendment package to manage the halibut charterboat fishery is for initial review in February 1999 and final action in April 1999. If the Secretary of Commerce approves a moratorium, implementation could occur in 2001. A minimum of one year would be necessary to allow development of the database, submission and appeals of qualification criteria, and issuance of moratorium permits. Other management measures could be implemented in 2000, if necessary, with Secretarial approval.

Background

The Council has discussed the expansion of the halibut charter industry and concerns of localized depletion of the halibut resource and the potential reallocation from the IFQ longline fishery since 1993. A surge in guided charter effort in the early 1990s in some small communities (e.g., Sitka) fueled Council concern. A two-prong approach was endorsed by the Council to resolve the perceived impacts of increased guided charter halibut fishing. The first was establishment of guideline harvest limits for Area 2C and 3A halibut charterboat fisheries; the second was a process to establish local area management plans for coastal communities.

The most significant factor in the creation of the GHLs was the perceived impact to the directed IFQ fisheries in Areas 2C and 3A. Because charterboat catches are deducted from the IPHC calculation of allowable halibut removals, any increase in charter catches results in a lower quota for the commercial IFQ fishery. The GHLs were adopted to prevent the erosion of commercial quotas in Areas 2C and 3A above the recommended GHL levels. The Council has also endorsed a regional approach, recommending the GHL only for Areas 2C and 3A. The

Council considered and rejected more specific GHLs for ADF&G fishing zones, because it would have conflicted with IPHC management of halibut (e.g., area-wide stock assessments, recordkeeping and reporting requirements).

The impact on local communities is another prevalent rationale for the Council to regulate the guided halibut fleet. The Council decision to not impose a GHL west of Regulatory Area 3A is indicative of that intent. Some communities are seeking to limit the expansion of local halibut charter fleets (e.g., Sitka, lower Cook Inlet). Other local communities in are only recently expanding and are encouraging the expansion of tourism opportunities, including halibut charter operations, in those areas (e.g., Unalaska/Dutch Harbor, Hoonah, Gustavus, Old Harbor, and Cheenga).

The Council has identified communities such as Sitka and lower Cook Inlet (Homer) as experiencing user conflicts over halibut. Members of those communities have proposed local solutions via LAMPs (BOF proposals have been submitted for Deep Creek and Kodiak and the Sitka Sound LAMP is awaiting implementation). The Sitka LAMP was designed to allocate the halibut resource via creation of user exclusion zones and did not place effort or catch limits on any sector, but emphasized a preference for the local non-guided sport and subsistence halibut fisheries. The Cook Inlet proposal for Deep Creek as submitted to the BOF in April 1998, consists entirely of a halibut charterboat moratorium. The Kodiak proposal is a placeholder proposal while community discussions continue.

LAMPs by design are flexible and can be designed to meet different objectives. As the problem in the halibut charterboat fishery is currently defined by the Council, it appears that individual LAMP proposals may address the Council goals, depending on the individual LAMP proposal (Alternative 1). Development of LAMPs has the benefit of involving the Alaska Board of Fisheries and its advisory committees and ADF&G staff in the process of resolving local issues. This is beneficial given that some solutions may impact state managed fisheries and allows for consideration of these impact in the development phase of the LAMP. Alternatively, the Council may proceed with recommending measures to implement the Area GHLs and proposed moratoria (Alternative 3). Yet another approach would be somewhere in between these two. The Council could directly allocate the halibut resource between the commercial and guided sport sectors, leaving unguided halibut removals unrestricted, and implementing moratoria and other management measures within LAMPs (Alternative 2).

New reporting requirements must be weighed within the context of potential reporting biases. The charterboat logbook was implemented in the spring of 1998, and the first year rate of compliance is yet undetermined. As of July 1998, approximately two-thirds of logbooks issued in Southeast Alaska were being returned. Also, the information collected using the logbooks has yet to be verified using independent data. ADFG staff have recommended that the data be verified over a three-year period to assure its accuracy. The Council may not wish to base part of the moratorium qualifications on such preliminary information, but may instead prefer to build the database of participants, effort, etc. prior to a moratorium analysis. This is the ADF&G Sportfish Division staff recommendation, stating, in part, the Department's opposition to either a statewide or area-wide moratorium proposed under Alternative 3.

Review of impacts of the GHL

The *major factors of uncertainty* which drive the impacts of the GHL are: (1) the actual biomass and quota for halibut in future years and (2) the actual growth rate experienced in guided sport fishery (demand function for trips). These two factors, in combination, will significantly determine the point at which a cap becomes constraining, and therefore significantly affect the economic impacts, relative to status quo management for the charter and commercial halibut sectors.

Biomass estimates for the North Pacific halibut stock were provided in the halibut charterboat EA/RIR (NPFMC 1997) and are not updated in this discussion paper. No significant changes to the halibut stock have been identified since the EA/RIR was prepared in 1997 A review of the status of the stock will be provided in the GHL EA/RIR. At present biomass levels, the biomass will not be constraining to the GHL for the next several years.

Growth in the number of resident sport licenses is correlated with the Alaska population which has grown since 1961 at 3.1 percent, but the relationship has not been constant (NPFMC 1997). Since 1961 the growth rate of licenses has been 6.6 percent annually, but over time that rate has fallen. Since 1985 the growth rate has been 3.4 percent, and since 1990, 2.9 percent. Since 1961, an average of 42 additional licenses resulted from each increase in population of 100. But the share of the population with licenses, which had been increasing until 1984, has fallen to 29 percent by the mid-1990s from its high of 34 percent. The reason for this decline may be due to the changing demographics of the population, but its cause is not clear.

It is important to note that any management alternative the Council recommends to limit halibut charterboat operations may be minimized by increases in the growth of visitors to the State. Charter usage is demand-driven. The fleet is currently overcapitalized in some areas of the state with many full-time charter operations meeting their individual capacity and many part-time operators entering and exiting the fishery around other recreational and commercial fishing seasons. The Council analysis reported that consumer demand requires only about 600 (full time equivalent) vessels from over 2,000 IPHC licensed halibut charter vessels. Some actions, such as vessel moratoria, annual bag limits, trip limits, etc., may result in increased costs and stricter limitations on halibut removals by residents who use charter boats to catch fish for personal consumption.

A smaller number of resident anglers have higher avidity rates to attain larger numbers of halibut for their personal consumption. These anglers are more likely to take 2-day trips and attain multiple day bag limits. These fishermen are more likely to be impacted by proposed restrictions on the charter fishery. Many non-resident anglers, particularly those who sign up for a charter in combination with other tourist activities (e.g., cruise ship, Denali Park bus trip) may be satisfied with a fishing charter for either halibut, king salmon, sockeye salmon, etc. and may be combining the fishing experience with a marine sightseeing trip, etc.

Growth in the number of non-resident licenses is related to the growth in the number of visitors to the State. The percentage of visitors who obtain a sport fishing licence has remained fairly constant since visitor counts began, at about 20 percent. This is in spite of growth over time in the percentage of visitors who arrive by cruise ship, particularly in the last 5 years. During this most recent 5 year period the number of cruise ship passengers has grown at a 9.3 percent annual rate compared to 6.3 percent for visitors in total. In 1995, 24 percent of visitors were cruise ship passengers. The majority of charter trips in Southeast are cruise ship passengers and/or non-residents. Most of the cruise ship charters target salmon because greater distances and time are needed to reach halibut grounds.

Historical *visitor trends* indicate that visitor volume grew moderately in the late 1980s, followed by a period of rapid growth through the 1990s (McDowell Group 1998). Visitors to Alaska listing vacation/pleasure as the reason for their trip grew an estimated 6.7% between Summer 1996 and Summer 1997, totaling approximately 839,000 people out of 1.1 million total visitors (Figure 1). This growth rate is lower than the average annual growth rate of 9% between 1989-97, and totals more than 70% in that eight year time span. Since 1961 the growth rate of Alaska sportfish licenses has been 6.6 percent annually, but over time that rate has fallen (NPFMC 1997). Since 1985 the growth rate has been 3.4 percent and since 1990, 2.9 percent. The percentage of visitors listing vacation/pleasure comprised 75% of all visitors. This pool of visitors supplies the charter fleet with customers.

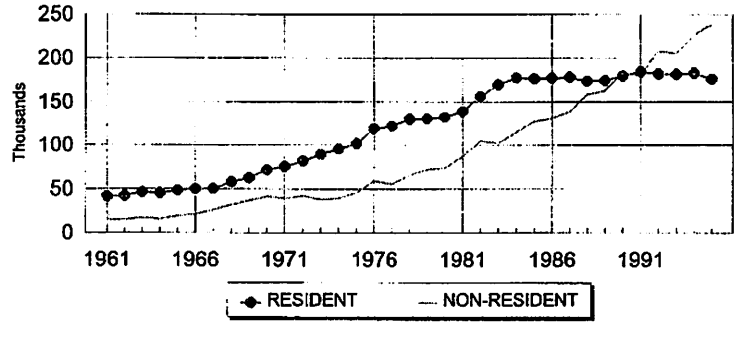


Figure 1. Alaska Sportfish Licenses, 1961-1995.

During 1985-97, the growth rate of licenses issued to residents has been less than that of non-residents so that over time the share of licenses issued to non-residents has increased (Figure 2). Since the mid-1980s the number of resident licenses have not increased while non-resident licenses have continued to increase at 6.7 percent. After 1990, the number of non-resident licenses surpassed those of residents for the first time and since then the number of non-resident licenses has been an increasing majority of the total. Of the non-resident licenses the foreign share has remained fairly constant at about 7 percent.

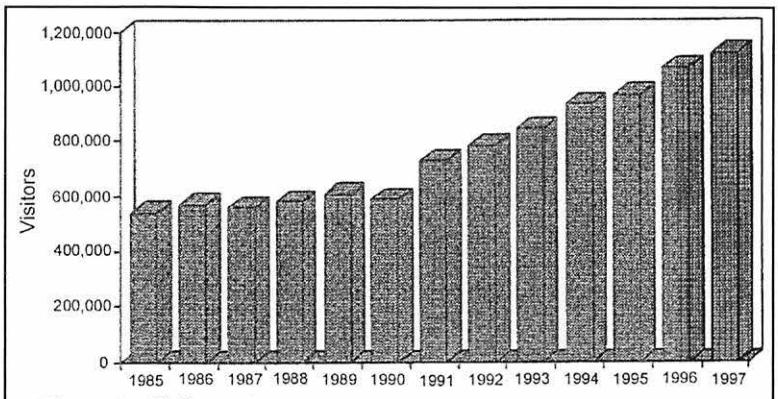


Figure 2. Visitor volume trends, summer 1985-1997 (May - Sept.).

List of Management Alternatives

The following list of alternatives was approved for analysis by the Council in April 1998. The Council added a rod permit program and a control date of June 24, 1998 to the analysis.

MANAGEMENT ALTERNATIVES

Alternative 1. Status quo. Do not develop regulations to implement a halibut Guideline Harvest Level.

- Instead, develop local area management plans as quickly as possible for areas with documented problems, through facilitation, etc., if possible.
- Employ the following six tools within a local area management plan (LAMP) to curtail catch rates of guided sport anglers: (1) line limits on boats, (2) annual angler limits, (3) vessel trip limits, (4) super-exclusive registration of charter vessels, (5) moratorium, and (6) sport catcher vessel only area (SCVOA) to address gear conflicts. These tools could be employed, as well as others not listed, within a LAMP framework to curtail guided sport catch rates.

Alternative 2. Under a GHL,

- Retain GHL at specified levels and convert the GHL to an allocation.
- Manage the guided sport fishery under status quo or according to LAMPs approved by the Council.
- Consider moratorium in the LAMPs.
- Bank uncaught halibut from the sport fishery to provide extra fish to sport fishery during subsequent years of low quota to provide stability to guided sport fishery.

Alternative 3. Under a GHL,

- Manage guided sport fishery status quo.
- Apply range of management measures listed above to curtail catch rates of guided anglers once GHL is attained.
- Apply management measures up to 2 years after attainment of GHL (1 year if data is available, but at the beginning of a year for industry stability).
- Employ combination of management measures (e.g., line, boat, annual and/or trip limits) depending on the level of catch reduction required.
- Include a moratorium under this alternative.

Alternative 1 recommends no additional action to implement the GHL and substitutes the LAMP process for halibut management for all users groups. The list of management measures addressed in this paper would be among those that could be incorporated in LAMPs. IPHC staff have suggested adding a seventh option within LAMPs to create fishing zones for different user groups.

The Council/Board LAMP protocol ensures that proposals for LAMPs will occur with or without the halibut GHL. The LAMP protocol is not strictly limited to halibut, and in fact, anticipates that affected groundfish and non-groundfish (salmon, lingcod, etc.) be considered in development of a LAMP. The protocol additionally expects that all user groups (commercial sport, charter, and subsistence) be involved as active participants in providing management recommendations contained within a LAMP. It is not expected, however, to be a speedy process. The Sitka Sound LAMP has been hailed as the prototype for development of additional LAMPs. Community members discussed different aspects of the plan for three years before reaching consensus. The Council and Board are on record as recommending that all LAMP proposals achieve consensus among the user group participants prior to submission for Council analysis and approval. Under the protocol, the Board agreed to take the lead in developing LAMPS. The Council also reserved the right to approve in total, reject outright, or modify the halibut provisions of a recommended LAMP given adequate biological or legal rationale.

It appears that Alternative 1 may not address the problem statement since, as a general concept, the LAMP may do nothing to restrict landings per se. However, some actions taken as part of a LAMP may in fact reduce effort and thus harvest. For example, limits on multiple day trips or restrictions on guide harvest could reduce effort and thus harvest. However, some communities may not wish to enact harvest restrictions as part of a LAMP unless other communities within the GHL affected area also enact harvest restrictions. A mechanism to encourage development of LAMPS would be to subdivide the area-wide GHL into community GHLs.

It is important to note that the LAMP process does not conflict with the problem statement or the GHL, except for the moratorium provision. LAMPs would act as a complementary action, but not a necessary one. Should the Council modify its original intent for implementing the GHL, individual LAMPs may be developed to meet the same management objectives under this alternative approach.

Alternative 2 recommends that the GHL be converted to an allocation and that management measures to manage halibut, including a moratorium, be implemented through LAMPs. It would also include the use of LAMPs to manage the halibut charter fishery. Management actions such as a moratorium, annual angler limits, vessel trip limits, and/or super-exclusive registration would be developed within a LAMP. A reserve that would bank unused quota of an allocation, and likely nullify the original GHL concept, is also included under this alternative.

The conversion of the GHL from a target or trigger for management actions to an allocation departs from the Council's original intent in its development of the GHL, but merits review. Halibut charter representatives have argued that the industry requires two things to remain viable: a two-fish bag limit and its traditional fishing season. The Council has concurred with these two points (see above problem statement). The reserve concept discussed above addresses this concern.

The GHL analysis has pointed out that under current assumptions of biomass, tourism, and industry growth the GHL annually assigned to the charter fishery would not be met by the fleet until the later years of the projections in the charterboat analysis. The fleet, through its representatives on the Council's GHL Committee, has not requested a more liberal bag limit or other measures that would allow the charter sector to reach its de facto share of halibut. Instead, it has requested consideration of two changes to the Council's approach of managing the halibut charter industry.

I. It recommends that the GHL be converted from a target or cap to an *allocation*. Conversion of the GHL to an allocation would cap the commercial sector share since both the charter and commercial catches would then be under a direct allocation: 87.24% to the commercial sector and 12.76% to the charter sector of the combined commercial and charter catch limit. The current interpretation is that the GHL is a charter cap. Charter (guided) removals are combined with non-guided removals for an estimate of total sport removals determined by ADF&G Sportfish Division. Total sport removals for a given year are subtracted from the International Pacific Halibut Commission's (IPHC) projected annual catch limit to determine the commercial quota for the next year. Under the current understanding of the GHL, the commercial sector is not restrained from harvesting the unused portion of the GHL and it would be allowed to harvest all fish not harvested by the charter fleet. Under the proposed conversion to an allocation, the commercial sector would be constrained and the unused portion banked for later use by the charter fleet.

II. The charter industry proposes that under *either* the GHL as a cap or converted to an allocation, those halibut that the charter fleet is assigned under the GHL that are not harvested by them be assigned a credit in a conceptual manner. This would result in the charter sector being allocated a sufficient allocation to meet its minimum level of harvest to maintain the season length or bag limit in a year when the GHL would other trigger reductions in either or both. The industry is explicit in not requesting an actual accounting of unused fish (pound for pound), but an acknowledgment in times of depressed halibut biomass that their minimum requirements need to be met to continue the charter fishery as a viable entity. The minimum is controlled by demand for halibut as evidenced by the number of clients. If client demand grows, the minimum would also increase.

On its face, this banking or as recently redefined as a *sportfish reserve*, appears to conflict with the Council's intent to cap the fishery under the GHL. The GHL would continue to represent a target, or benchmark, for the guided sport fishery. The minimum amount needed is the previous year's catch that did not result in triggering the GHL. But, the reserve effectively moots the GHL, in that the minimum amount of halibut guaranteed to the charter fleet under a reserve may exceed the cap in a given year.

To the charter industry, however, the reserve is a reward for forgoing harvesting halibut beyond their immediate needs in times of abundance. It is also a minimum amount needed, agreed to by the Council, to not decrease the charter season or bag limit in times of decreased halibut abundance. Additionally, the commercial sector accrues the unconstrained benefit of unused charter GHL during times of halibut abundance when the charter fleet does not reach the cap. Under the sportfish reserve, the commercial sector would be asked to sacrifice a disproportionately smaller amount of halibut in times of depressed stock abundance so that the charter sector could remain viable. The analysis concluded that a decrease in halibut, and corresponding revenues, for the charter fleet has a *proportionally* greater impact than a similar decrease in halibut (and revenues) to the commercial fishery, as it represents a much greater *percentage* change in overall revenues for the charter sector.

Alternative 3 recommends implementation of management measures to keep charterboat catches below the GHL. Implementation of an area-wide (2C/3A) moratorium is included under this alternative. As stated above,

development of LAMPs will occur with or without implementation of the GHL, so an area-wide (2C/3A) vs. local (LAMP) moratoria may require additional clarification. The current recommendation by the GHL Committee is that an area-wide moratorium would trump a LAMP moratorium, such that a LAMP could further restrict participation within a broader Area 2C or 3A moratorium. This aspect distinguishes Alternative 2 (moratorium within a LAMP) from Alternative 3 (area-wide moratorium), and requires further consideration. This issue is discussed further under the moratorium section of this paper. Remember again, that LAMPs with or without a moratorium will proceed on a separate course of action through the joint BOF/Council protocol.

Description of Individual Alternatives

I. Local Area Management Plans

While unguided sport fishing is growing, it is growing at a slower rate than the guided sport fishery, and accounts for about 3% of the overall harvest of halibut statewide. Problems for the non-guided fishery, as well as subsistence users, occur in the context of reduced local, or near-shore, availability of halibut. These localized depletions are due, in part, to increased catches by the charter fleets and by increasing catches of commercial IFQ in near-shore areas. Non-guided sport and subsistence users are forced to travel greater and greater distances to catch their halibut. Neither capping the charter fleet catch at current or increased levels, nor imposing a moratorium on new entry, even at regional levels, is going to address this type of problem. Localized depletions, and user conflicts, are occurring at current harvest rates. Local management plans, put together by the various user groups involved, appear to be a potentially effective way to address these issues, by reserving near-shore areas for unguided sport and subsistence users, for example.

Local Area Management Plans or LAMPs are a new management tool used by the Council to resolve user conflicts in communities competing for a common resource. In February 1998, the Council and Board of Fisheries adopted the following protocol to guide the successful development, processing, and implementation of local area fisheries management plans. Though the protocol covers development of local area management plans for all species of interest in a local area, the Council's main purview will be over halibut and those species covered by one of the Council's fishery management plans.

SCOPE AND CONTENT OF PROPOSALS

It is the expectation of the Board and Council that any proposals submitted for review will be well thought out and reflect the efforts and a high degree of consensus of representatives of all users of the fish species in the local area covered by the proposed plan. Local commercial, sport, charter and subsistence representatives, and others as appropriate should be involved in the development of proposals, preferably using a local advisory committee or task force approach. When submitting a proposal, users should be identified and their involvement in the process documented. During development, appropriate agency staff (NMFS, ADF&G, Council, Board, IPHC. etc.) should be contacted to provide guidance and legal limitations so that the proposal has a much higher likelihood of not facing difficulties in the review process. Proposals should encompass all shared fish stocks in the local area and should address as appropriate, catch and possession limits, gear types, effort limitation, closed areas, seasons and overall boundaries of the local area plan. Proposers should anticipate that the local plan, if approved, likely will be implemented for no less than three years before there will be another opportunity to revise it. They should also be aware that the schedule below spans over a year from the April deadline for proposals to implementation sometime in the spring or summer of the following year or longer. The first LAMP was approved in 1998 for Sitka Sound. Regulations for the Sitka Sound LAMP are not yet implemented, but it appears that the multiple user groups are voluntarily complying with the community-based agreement.

II. Line Limits on Boats

This action would restrict the number of lines legally fished from a charter vessel. One option would limit the lines fished to the number of paying passengers. Line limits could prohibit the captain and crew from halibut fishing during a paid charter and result in possibly two fewer lines and four fewer fish being caught on each charter. A cursory examination of this proposed action suggests that boat limits may constrain total charter halibut harvests by 2-4 fish per fishing charter vessel for each day spent fishing. An estimate of average daily active charter vessels and number crew per vessel will be necessary to estimate the impact of this measure on halibut removals. Such a prohibition may result in a significant limitation on halibut removals and is generally supported by the charter industry as less onerous than some other possible management measures. The impact in terms of pounds of halibut saved would vary depending upon the area under consideration. In general, the saving would be greater in Area 3A than in Area 2C given current regulations.

In Southeast Alaska, a state regulation limits the number of fishing lines in the water for halibut to a maximum of six per boat. Most charter operators typically take 3-4 clients per trip. A Southeast charter owner serving on the GHL Committee requested that the Council consider grandfathering vessels who are Coast Guard qualified to carry more than six passengers. This latter suggestion would be problematic for the State since it might result in conflicting State and Federal regulations.

In Southcentral Alaska, the majority of halibut charters are licensed to carry six passengers, but some operate as headboats or military charters, primarily out of Kodiak, Seward, and Homer. These vessels can carry 16-20 passengers. In Seward, two operators had several boats capable of carrying 16-26 passengers. In Seward, the Air Force has three 43-foot boats that can carry 18-20 passengers for a variety of bottomfish and halibut. The Army has a 54 ft boat that can carry 20-22 passengers and a 40 ft boat that can carry 14 passengers that travel outside resurrection Bay where they can target halibut. In Kodiak, most charter vessels are 6-pack boats, perhaps six are 30 ft boats, and eight are 40-50 ft an can carry up to 18 passengers. The Valdez fleet consists mostly of 6-pack or smaller boats; six boats can take 8-12 passengers. Because of such differences, line limits may need to be approached on a community basis that recognizes differences in the existing fleet.

III. Boat Limit

A boat limit would restrict the number of halibut legally landed on a halibut charter boat in a given day (midnight to midnight) based on individual bag limits and number of paying passengers. This action appears to have no additional impacts on constraining halibut charter removals beyond those included under line limits, when eliminating lines fished by captain and crew. Boat limits may conceptually limit the boat to a total of 10 fish, for example, but in practice would likely remain under a 2-fish/person/day limit by anglers voluntarily limiting the boat to five customers. Since an individual angler must catch his/her own fish (the boat catch cannot be shared/ divided), a 10 fish boat limit for six anglers, would result in two anglers being allowed to harvest only one halibut. At the cost of a halibut charter, it is unlikely that anglers would pay this cost with their opportunity to harvest the allowable bag limit in question. Thus, boat limits do not appear to be an effective management tool for the purposes of reducing guided halibut removals.

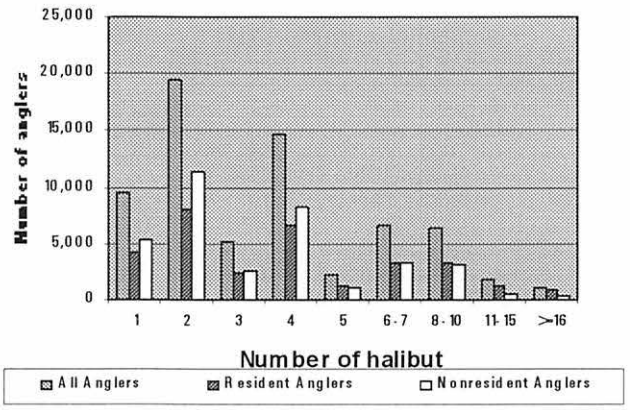
IV. Annual Angler Limits

Annual angler limits would restrict the number of halibut that can be retained annually by an individual angler. ADF&G and the Council have previously examined the issue of possession limits. Most charter clients take either two or four halibut in a year (Figure 3). A small percentage of avid anglers exceed four fish in a year. This information indicates that annual angler limits will have less impact on total halibut removals. It may result in significantly impacting the amount of halibut taken by a few fishermen, but have less impact on total removals because it does not address trip demand by anglers. In 1997, the Council decided to not pursue halibut possession limits as a separate action from charterboat management.

V. Vessel Trip Limits

Vessel trip limits would prohibit vessels from making more than one trip each day. In Southeast, half-day trips for cruise ship passengers are common, but most trips target salmon. Roughly, <10 percent of South Central and Southeast halibut charters are multi-day trips. Thus, it is not expected that a vessel trip limit alone will have a significant impact on keeping the fleet below the GHL.

Figure 3. Number of anglers harvesting "x" halibut



VII. Super-exclusive Registration

Super-exclusive registration would restrict a charter boat registered in one community or LAMP from operating in another community or LAMP in the same year. This action would redistribute fishing effort and removals but would not be expected to constrain halibut removals. It may, in fact, increase effort and removals because overcapitalization and overcrowding may motivate a particular charter vessel to relocate into a less crowded port.

VIII. Sport Catcher Vessel Only Area (SCVOA)

A Sport Catcher Vessel Only Area to protect locally designated areas for sport (guided and non-guided) use only does not appear to reduce halibut removals, but may be a valid management tool to be included within a LAMP. IPHC staff have suggested adding a similar alternative that would create specific fishing zones for different user groups. This approach could also be applied in the local area management plans.

IX. Convert the GHL to an Allocation

This option would convert the GHL to an allocation. In years when the allocation would be reached, regulatory measures would be enacted to constrain the charter fishery. However, in years when the allocation would not be reached, converting the GHL from a cap to an allocation would likely result in constraining commercial halibut removals (see earlier discussion of Alternative 2). The conversion to an allocation may result in (positive) biological/conservation impacts, such that reserved fish (those allocated to but not harvested by the guided sport sector) would be left on the grounds to further contribute to the biomass through growth and reproduction.

X. Sportfish Reserve

The GHL Committee redefined the banking concept to more clearly define its intent. In years when the charter fleet would not catch the amount allowed under the currently defined GHL (as a cap under Alternative 3), this "surplus fish" would be *de facto* "granted" to the directed IFQ fishery in exchange for a possible future return grant to guarantee the guided sport season and bag limit for economic stability in the fishery. Under this action, unused allocations of halibut to the charter sector which is absorbed by the commercial sector would be conceptually reserved for future reallocations to the charter sector from the commercial sector in years of lower abundance when the GHL would be met. In such times, additional allocation to the charter sector would likely be reallocated from the commercial sector, so as not to allow removals above recommended levels.

The halibut sportfish sector has been limited to a 2 fish bag limit since 1974. The guided sport fleet maintains that its catch should not be reduced to lower than needed to maintain the bag limit and season even under decreased halibut abundance. It has been willing to maintain the current bag limit even in times of greater

abundance (as is currently the case). In return, the fleet is recommending that the Council implement the reserve to ensure the bag limit and season length during periods of decreased abundance. (Note that increased fishing effort also could result in the guided sector exceeding the GHL; this is discussed in greater detail earlier in this paper.) Effectively, the reserve is an alternative to the GHL concept since it eliminates the cap by 'reserving' previously unharvested fish. Under the GHL, the commercial sector would gain in high quota years, but would lose some allocation in low quota years. If and when the halibut stock abundance declines to historical lows, then both sectors would be reduced. It is possible that faced with conservation concerns, season length and bag limits might then be affected.

The sportfish reserve, which has been linked with Alternative 2, to convert the GHL to an allocation, may have negative biological impacts since it would be invoked to increase guided halibut removals likely during years of lower halibut quotas due to lower halibut abundance. However, this impact would be mitigated if the reserve amount were redirected from the commercial sector's allocation, and not in addition to the commercial and guided sport quota. IPHC staff strongly recommends against harvest in addition to the quota. Should the GHL be converted to an allocation of 12.76% of the combined commercial and guided sport halibut quotas for Area 2C as recommended, the commercial allocation would be 87.24%. If these specific allocations are set in regulation, the IPHC or the Council would be legally unable to deviate from these allocations and the sportfish reserve could not be coupled with the GHL as an allocation. However, the Council could recommend regulations with conditional allocations and set a formula for redirecting a portion of the commercial allocation to the guided sport sector, for the year(s) subsequent to when the GHL is exceeded.

The reserve concept recognizes that uncaught fish is not available as a unique quantity in future years. Instead, what is available is the yield associated with the uncaught biomass, i.e., some principal is being saved and what is available in future years is only the interest on that saved principal. If the stock biomass declines in future years, the available yield will decline in proportion and the yield forgone from previous years, when stock biomass may have been higher, will not be available as a simple add-on to the current year's yield. Specifically, no yield in excess of the present year's estimated total yield will be available for harvest. Changes in what is to be made available to a particular sector in a given year must come through reallocation. The IPHC staff will not recommend extra halibut harvest above the quotas set during its annual meeting. Thus, the reserve must come from the combined sport-commercial quota. The Council can set the allocations as fixed percentages, or floating percentages (conditional allocation), or can set an unallocated portion of the combined quota for reallocation. IPHC staff will not support an open-ended grant of halibut from the resource above the combined quota. It should also be remembered that the commercial fleet has also left quota unharvested each year, particularly since the IFQ program was implemented in 1995.

The GHL Committee recommended similar language to that in Alaska State regulations to define a salmon reserve to be applied to the halibut fishery. Such language might read, "If the guided sport halibut fishery falls short of the minimum needed to maintain the current bag limit and season length under the GHL, the subsequent year's commercial fishery quota will be adjusted down to allow the guided sport fishery to continue fishing."

XI. Rod Permits

A rod limit is currently in State regulations for Southeast Alaska: 1 rod per person; 6 rods per boat; up to 6 lines/vessel; limited to the number of paying clients such that the maximum number of fishing lines that may be fished from a vessel engaged in sport fishing charter activities is equal to the number paying clients on board the vessel. Washington State has an angler permit program, which is based on an equation of length X breadth/factor. Based on this, a 6-pack vessel limited to 6 persons could have more than 6 rods. The GHL Committee identified perhaps 50 vessels that could upgrade under this type of program. The committee recommended that the Washington program would be a more useful management tool under license limitation. There is not a rod permit program in Oregon as had been earlier discussed in Council testimony. This alternative is complicated and has enforcement difficulties.

XII. Moratorium

A moratorium would limit the number of guided sport fishing operations that could legally harvest halibut in an area. Only those operations that could prove they have a fishing history that meets the moratorium's minimum requirements would be permitted to operate a business that provides guided halibut fishing trips. New operations and those that do not meet the minimum criteria would not be allowed to enter the fishery until they were able to obtain a legal permit.

Remember that the guided halibut fleet developed because people are willing to pay someone to take them halibut fishing. This demand for halibut guides comes both from Alaska residents and visitors to Alaska. Should the number of people wishing to take a halibut charter increase and the number of seats available remain fixed by a moratorium, then the price of a charter will likely increase as clients compete for the available seats, and it is possible that demand could outstrip supply.

Information presented earlier in this document shows that the number of tourists visiting Alaska has increased each year since 1990. A corresponding table indicates that the number of fishing licenses sold to persons that are not Alaska residents has also increased during the 1990's. As of 1995, almost 250,000 sport fishing licenses were sold to non-residents. If tourists visiting Alaska feel that halibut fishing is an important part of their vacation, then limits on the guided sport fleet which restricts their access to the halibut fishery may have adverse impacts in the State's tourism industry.

On the other hand, implementing measures that limit the amount of sport caught halibut may provide the commercial fleet protection against harvesting a smaller percentage of the quota in years with low quotas. However under the current TACs, which have increased fairly dramatically over the past two years, the commercial industry has shown some willingness to forgo quota, hoping instead that reducing the supply of halibut on the market will allow them to receive a higher ex-vessel price.

It should be noted that ADF&G staff has indicated that the State would not support a moratorium for the 2C and 3A areas, whether the areas are combined or separated. ADF&G staff noted that there is currently no State constitutional authority for any form of limitation system or moratorium on recreational anglers, including the charter fleet. Thus, any proposed moratorium the Council implements for halibut must take into account the ripple effects on other species that would be targeted by the charter fleet. That concern, along with the concern that charter operations and facilities are in very different stages of development in areas across the State, would compel the State to oppose any form of state-wide or area-wide moratorium or license limitation system. The State could support a moratorium or license limitation system on a local level (as a LAMP component), given sufficient justification.

The State has indicated they would prefer to develop and implement any guided sport moratorium through LAMPs which are reviewed by the Board of Fish as well as the Council. This would allow the impacts on species other than halibut to be considered by the Board before any regulations were passed on to the U.S. Secretary of Commerce. They also felt that the diversity in the guided sport fisheries could best be dealt with at the local level, as a one size fits all approach might not be the best solution.

How would the moratorium work under a GHL?

The purpose of the GHL was to slow the guided sport harvest the year after the harvest limit set by the Council is reached or exceeded. It is unlikely that a moratorium will slow the harvest rate of the guided sport fleet once the GHL is reached. Measures included within the moratorium may, however, decrease the chances that the fleet would reach the GHL, or at least increase the length of time before the GHL is reached.

A moratorium may help prevent the fleet from reaching the GHL by stopping new vessels from entering the fishery, and by limiting participating vessel's harvesting capacity through other regulations. Limiting the number

of boats that can operate in the guided halibut fishery may help slow the rate at which the guided fleet increases their harvest. This is of course depends on the number of vessels which are issued moratorium permits, and the latent capacity of those vessels.

If a moratorium limited the number of vessels to the current fleet, but the qualified vessels were operating at less than full capacity, then the annual harvest could increase. For example, let us assume that on average the charter fleet operates 5 days a week and carries an average of 5 clients per trip. In this example the fleet average would be 25 clients per week. However, if vessels are allowed to carry 6 clients and can operate 6 days a week, they could actually serve 36 clients in a week. The growth from 25 to 36 clients per week is a 44% increase. Given that the GHL allows a 25% increase in harvest (based on the 1996 fishery), then it is possible (at least under this scenario) that the latent capacity of the active charter fleet could allow the GHL to be exceeded. This assumes that catch rates per client, the size of halibut caught, and the season lengths remain constant. However if there is a large increase in client demand for halibut charter trips under a moratorium (i.e., there is no more latent capacity), then limiting the number of vessels will keep new guides from entering the fishery and may slow the rate at which catch increases.

If the number of vessels were limited by a moratorium, then the maximum pounds of halibut that could be taken is constrained by the size of halibut harvested, the number of clients a vessel could service in a day (maximum number of clients per trip times the number of trips per day), and the number of days a vessel could operate during the year. The activities that increase harvesting capacity (outside of the number of operations), could be controlled with or without implementing a moratorium. However, limiting the number of passengers a vessel could carry without limiting the number of vessels may not be effective in keeping the fleet from reaching the GHL.

The halibut quota will be an important factor in determining if the guided sport fleet will reach the GHL in a year. If the quota declines significantly when compared to 1995 levels then the guided sport fishery may very well exceed the GHL even if their sector has not experienced any growth in terms of actual pounds harvested. Under this scenario, limiting the number of vessels that can participate in the fishery will provide the fleet little protection against reaching the GHL, because the catching capacity needed to harvest the GHL will likely qualify under any moratorium scenario.

How would an area-wide (2C and 3A) moratorium work with LAMPS which also contain moratoriums?

The Council is considering a moratorium for IPHC areas 2C and 3A. Some of the LAMPs that are currently under development also include a moratorium. It is possible that if both the area-wide and LAMP moratoria were put into regulation they would conflict. If there are conflicts, a plan will need to be developed that defines which moratorium would take precedence over the other. For example, if the qualification requirements differ and the Deep Creek LAMP moratorium is more restrictive, what would happen? Would only those persons that qualify under the LAMP be allowed to fish in the Deep Creek area, or would any one with a state permit be allowed to fish? If the area-wide moratorium has precedence what is the purpose of a LAMP moratorium? If the LAMP moratorium took precedence, would the area-wide permit holders that did not qualify under the LAMP be forced to fish only areas outside the LAMP, such as Old Harbor, and would this negate the goal of the Old Harbor LAMP? If the intent of the Old Harbor LAMP is to allow its residents to enter the charter fishery and benefit from increasing tourism in the area, then limiting the participants in the Old Harbor area to those that already hold an area-wide permit would do Old Harbor residents little good.

On the other hand, if an area-wide permit was more restrictive, could a person that qualified under a LAMP in Old Harbor fish within the local area but not outside? Or, would the permit holder that qualified for the local plan, but not the area-wide plan, not be allowed to fish anywhere covered under the larger moratorium? The issue of which moratorium will take precedence over the other and how the moratoria would mesh together will need to be resolved before they are developed for both LAMPs and IPHC areas.

Problems that could arise if local and area-wide moratoria did not mesh well together go beyond who could fish in a given area. It also applies to all other aspects of the moratorium's structure. One moratorium could sunset after a given number of years and the other could be permanent. One moratorium could allow permit transfers and the other may not allow transfers. A permit for a larger vessel may allow the boat to carry more than six passengers under one moratorium but not the other. The hierarchy of which moratorium would take precedence over the other needs to be clearly established prior to implementation, or only one type of moratorium should be selected.

Structure of the Moratorium Based on the GHL Committee recommendations.

A moratorium's design is based on several criteria. These criteria include who would be permitted to fish, what permit recipients are required to have done to qualify, and what they are allowed to do under the permit they are issued. The following discussion pertains to the proposed Area 2C/3A moratorium.

Qualification Criteria
When the Council considered a moratorium for the guided sport fleet in 1997, a major obstacle in the path of implementation was determining who were the actual participants. Several sources of data existed, but none were refined enough to allow an analyst to determine who actually operated a halibut charter service during a year. The logbook system, implemented by ADF&G in 1998, should help clarify who actually participated in that year. As discussed earlier in this document, the State has expressed concern over using these data in the first year of the logbooks existence. However, as the industry becomes more familiar with filling out these reports, the data quality will likely improve. Also, if the logbooks are only used to prove a person made a single halibut landing, the quality issue will likely be less of a problem than if logbooks were used to determine a threshold number of landings or trips. This of course assumes that everyone in the industry is filling out the log book. ADF&G has expressed concern that, in their opinion, using the 1998 log books to verify participation may not be appropriate. They feel that before the log book system is used to determine who qualifies under a moratorium, additional checks on the data quality should be conducted.

The GHL Committee has by consensus selected the option that would issue moratorium permits based on a person having held a 1995, 1996, and 1997 IPHC license and having filed a 1998 ADF&G logbook. Under this eligibility criteria, the person would need to have held an IPHC license in each year 1995-97 and submitted a legal ADF&G logbook, which reports halibut landings, to ADF&G during any week in 1998 to qualify for a permit.

The Committee's intent was to issue the permit to a person based on his/her participation, and not vessel activity. IPHC licenses are issued to vessels and are easily trackable by ADF&G number. Licenses are also signed by the captain and/or owner of the vessel, but no unique person identifier is included on the form (e.g., SSN) other than the signature. Therefore, it would be more difficult to match persons on IPHC licenses and ADF&G logbooks than vessels. Still matching the people from the two data sets is probably possible, though it will likely require more time checking the data and will result in a greater possibility for error.

Required Evidence of participation
The GHL Committee divided the evidence required for qualification into two categories. The first category included the information that would be required for proof of qualification. These data included information from the IPHC license, CFEC permit files for sport charter vessels, and the 1998 ADF&G Saltwater Charter Logbook. Data that could be used to supplement the mandatory information could be derived from Alaska state business license files, sportfish business registration files, records of passenger for hire insurance, ADF&G guide registration files, and proof of enrollment in a drug testing program as is required under CFR 46. It is likely that the supplemental information would only be used in cases where there is doubt about a person's eligibility after reviewing the mandatory data sources.

The IPHC dropped the requirement that halibut sport charter vessel owners, operating in Alaska, apply for an IPHC license in 1998. The reason IPHC made this change was because the Commercial Fisheries Entry

Commission (CFEC) implemented a sport charter vessel permit program in 1998, and the IPHC did not want to require vessel owners to file duplicate reports to the two separate agencies. Instead the IPHC plans to use the permit information collected by the CFEC and the logbook information collected by ADF&G to fill their information needs. The IPHC had discussed continuing licensing sport charter vessels for one more year in order to have a cross check between IPHC and CFEC files. Due to the time involved in issuing the permits and the limitations in knowing whether the IPHC license was active, the IPHC opted to discontinue licensing vessels in 1998.

Currently the ADF&G logbook data are not available for the 1998 fishery. Without those data, developing an estimate of the number of persons who would qualify for a moratorium permit is not possible. The information that is currently available comes from the 1995-1997 IPHC license files (Table 1). The number of persons that held an IPHC sportfish license each year from 1995 through 1997 will likely overestimate the number of permits that would be issued based on the GHL Committee's preferred alternative, because that alternative will exclude persons that held an IPHC permit each year from 1995 through 1997, but did not file an ADF&G logbook with a halibut landing any week during 1998. These 1,300+ eligible individuals/vessels (without knowing yet how many filed logbooks with ADF&G), is still more than double the vessels needed to harvest the current GHL (NPFMC, 1997). Therefore if only the 1995, 1996, and 1997 IPHC license files were used to determine eligibility, the moratorium would likely not be very effective in keeping the fleet under the GHL.

Table 1. Number of IPHC Licenses

Number of IPHC Sportfish Licenses	Year			
	1995	1996	1997	License Held All Three Years
Vessels	2,334	2,615	2,099	1,321
People	2,334	2,615	2,099	Approx. 1,340

The number of persons that held a license each year are based on the minimum number of licenses held in any one year. As an example, a person was listed as the owner of three vessels in 1995, five vessels in 1996, and eight vessels in 1997, according to IPHC records. This person would have only been given credit for holding three licenses in each year 1995 through 1997.

Preliminary information, through mid July 1998, indicates that about 890 ADF&G Saltwater Logbooks were issued to vessels homeported in Southeast Alaska, and approximately 595 Saltwater Logbooks were issued to vessels homeported in Southcentral Alaska. Of the logbooks issued for vessels in Southeastern Alaska, 290 went to the Southern Southeast area, 70 to Petersburg/Wrangell, 200 to Sitka, 290 to Northern Southeast, 20 to Haines/Skagway, and 20 to Yakutat. In the Southcentral area 400 logbooks were issued to vessels from Cook Inlet, 120 to Prince William Sound , and the remaining 75 to the Kodiak/Alaska Peninsula area. Later this fall we hope to be able to provide an update on the number of logbooks that were completed and returned to the State.

Who would be issued the moratorium permit?

It was the committee's intent that permits be issued to persons and not vessels. They then defined the person as the business owner or lease holder. While it may be more difficult to track persons across different data sets, it does reduce the problems associated with people using different vessels at various times during the qualifying period. For example, the transfers of fishing history would not be an issue if a vessel is bought or sold.

The problems associated with when a person should be issued a license are numerous, but they can be overcome. Recall that the IPHC license has a field for the name of the vessel, the ADF&G vessel number, Coast Guard documentation number, the vessel owner's name, the captain's name, and the license type (sport only or both sport and commercial). The only field that has information in every observation is the license type. The other

fields are blank some of the time. A few examples will illustrate some of the problems encountered after briefly studying the 1995, 1996, and 1997 IPHC license files.

1) In one case Fred Smith is listed as the captain on five IPHC vessel licenses during 1995 and 1996, but in 1997 is not listed as the captain on any licenses. During 1997 Kim Smith is listed as the captain of the same five vessels that Fred Smith captained during 1995 and 1996, but did not hold a license in either 1995 or 1996. No owner was listed on the IPHC license for any of these five vessels. The question is, should any licenses be issued if the requirement is that a person held an IPHC license each year between 1995 and 1997?

2) Toney Z. Smith was listed as the owner of a vessel in the IPHC license file during 1995, but not 1996 or 1997. However, a Tony Z. Smith was listed as the owner of the same vessel during 1996 and 1997, but not 1995. It is likely that this is the same person and he should be given credit for holding a license each year. Interestingly, Peter F. Smith is listed as the captain of Tony's boat each year. Peter is also listed as the owner of four other vessels (each year between 1995 and 1997). So according to IPHC files, Peter was the captain of Tony's boat and owned four boats of his own. So, Tony may qualify for one license and Peter, four.

3) Kelly Smith is listed in the IPHC vessel files as a vessel owner and captain in 1995 and 1996. In 1997 she is only listed as a captain. William Jones is listed as the owner in 1997. Should Kelly be issued a license based on participation in each year?

Other grey areas, in terms of who should be issued a permit, may be encountered. These situations are likely to be more pronounced when the IPHC data are joined with the ADF&G logbooks.

Permit Transfers
After initially discussing that transfers should not be allowed, the Committee selected only one option, and that was that transfers should be allowed.

Vessel Upgrades
Vessel upgrades considered by the committee dealt with the number of passengers that could be carried by a vessel. It was the consensus of the Committee that the permits would be limited to six clients per vessel. The other option listed in their minutes was to allow larger vessels from Southeastern Alaska that are currently limited to six-pack licenses to upgrade and carry more than six clients at a time.

By limiting the number of passengers a charter could carry, upgrade restrictions like those placed on the commercial fisheries may not be needed. Recall that under the groundfish and crab moratorium there is a limit on vessel length increases (20% LOA). Other limits on increasing the vessels horsepower or changing gear were also considered for the commercial fishery, but may not make as much sense in the context of charter fisheries.

Duration of the Moratorium
The GHL Committee, by consensus, selected the option of keeping the moratorium in place as long as the GHL remains in effect. If the Council chooses this option, the moratorium and GHL would be permanent, and would require further Council action to amend the program before the moratorium would cease. It also means that the Council would need to take action to keep the moratorium, if they decide to drop the GHL in the future.

Other options recommended by the Committee were to sunset the moratorium after three or five years (three years, with an option to renew it for two additional years). These options would allow new entry even if the fishery were still operating under the GHL.

Other Provisions of the Moratorium
Several other provisions were also considered as part of a moratorium. These included the concept of requiring a minimum number of days fished or a minimum number of pounds of halibut caught to qualify for a permit. This concept was rejected by the committee because they felt it would be difficult to separate salmon from halibut

effort. However, using the ADF&G logbooks may allow this information to be broken out in a crude fashion. The logbooks list the number of days that halibut were caught on a charter. This does not necessarily mean the entire trip targeted halibut, it would only prove that halibut were harvested. It is also possible that a charter could have gone fishing with the intent of targeting halibut, but did not record any landings. That trip would not likely count towards qualification. Yet with some simplifying assumptions about what constituted a halibut trip in 1998, it may be possible to determine if the minimum number of days fished or the minimum number of halibut needed for qualification were harvested.

Linking a guaranteed season length to the moratorium was also considered by the committee. This means that if a moratorium is put in place, a definition of the fishing season would also be needed. This was also the Council's intent under the GHL. The Council stated when they passed the GHL that they did not intent to shorten season lengths. Their intent was to slow the pace of the fishery through other, though undefined, management measures and to maintain a fishery of traditional length.

The concept of a rod permit and a sportfish reserve were also considered as part of the moratorium. Both of those concepts have been discussed in earlier sections of this document and will not be discussed further here.

Implementation Issues

1. Regulatory Development

Implementing a GHL for the guided sport fishery for halibut would require the development of regulations. These regulations would specify the GHL for each portion of the fishery that is to be managed under a GHL (IPHC regulatory areas 2C and 3A) and describe the management measures that would be employed if in fact those GHLs were reached. Typically, it will take about 6 months to develop regulations, from the drafting of the proposed rule to the effective date of the final rule. Since halibut is not a groundfish species specified in a fishery management plan (FMP), no FMP amendments would be necessary for this action.

2. Annual Management of the GHL

After completion of the regulations, enforcing the GHL would require annual management to monitor catch. If the volume of catch indicated that the GHL had been reached or exceeded, management measures would have to be employed in subsequent years to ensure that guided sport harvests of halibut remain below the GHL. Several methods may be used to employ these management measures. For example, several management measures may be specified in the regulations to be used if the GHL has been reached. Choosing the appropriate management measure(s) could be left to the discretion of NMFS. Alternatively, different management measures can be specified for use for different levels of catch above the GHL. Or, a single management measure can be specified. Whatever method is used, it is important to note that the management measure(s) will be employed after the season in which the GHL was attained.

3. Management Measures

Several management measures to curtail guided sport catch of halibut if the GHL is reached have been discussed by the GHL Committee. These alternatives include: (1) line limits on boats; (2) annual angler limits; (3) vessel trip limits; (4) super-exclusive registration of charter vessels; (5) moratoria; (6) sport catcher vessel only area; and (7) local area management plans. These alternatives could have different implementation impacts.

Line limits on boats

This management measure would restrict the number of lines that can be fished from a boat. Currently, the State of Alaska has a rod limit of one rod per person. In Southeast Alaska, a further limit of 6 rods per boat is imposed. Other constraints, such as U.S. Coast Guard 6 Passenger for Hire License, also impacts the number of lines that

can be fished from a vessel. Ensuring that persons conformed to line limits would require the participation of enforcement.

Annual angler limits

This management measure would restrict the number of halibut retained annually by an individual angler. Currently, there is a daily bag limit for halibut but no overall annual limit. This action, like line limits on boats, can be imposed by regulations but will require the participation of enforcement to ensure compliance.

Vessel trip limits

This management measure would restrict the number of trips a vessel could take during a specific time period (e.g., only one trip per day or four trips per week). This type of limitation would must likely require a method to monitor trips to ensure conformance to the requirements. For example, punch cards could be used to monitor the number of trips or a check-out/check-in requirement could be imposed.

Super exclusive registration

This management measure would limit the area in which a vessel could operate. Super exclusive registration could be season-long (i.e., once a vessel registers for an area, that could only be used in that area for the entire season) or only for the duration of the registration (i.e., a vessel can move to another area by changing registration area). Although this management measure may have some impacts on harvests, its primary function would be to prevent user conflicts.

Moratoria

This management measure would limit the number of vessels by area. This defined area could be the entire regulatory area (e.g., IPHC Regulatory Area 2C) or a smaller area as defined by a LAMP. Previous experience with moratoria indicates substantial implementation and enforcement costs. Eligibility criteria must be developed based on participation in and dependence on the fishery. Applications for moratoria permits must be processed. Monitoring and enforcement must continue throughout the duration of the moratoria. Other design considerations include but are not limited to: (1) leasing of permits; (2) transferability of permits; (3) permit holder on board requirements; (4) ownership requirements (i.e., individual only or any legal entity); and (5) limit on the number of permits held by individual or other entity.

Sport catcher vessel only areas

This option, similar to super exclusive registration, would impact user conflicts more than reductions in harvest. Enforcement and monitoring would be the primary implementation concerns with this management measure.

Local area management plans

This management measure has potential for resolving local user conflicts and may be used to incorporate other management measures on a local basis. However, usefulness of a LAMP to maintain harvests under a GHL for an entire IPHC regulatory area may be limited unless there is significant coordination among other LAMPs within the same IPHC regulatory area. Implementing LAMPs require significant monitoring and enforcement costs, but LAMPs do have the advantage of heightened local attention, especially if the LAMP was developed through community consensus.

Conclusions

This preliminary examination of the problem statement for this fishery and the Council's proposed management measures initially suggests that many of the proposed measures will not keep the charter boat fleet under the GHL, since effort and removals are primarily demand-driven in an overcapitalized fleet. Simply, there are too many (double) charter vessels in the halibut fishery capable of taking far more paying passengers. This potential for increases in fishing effort overrides most of the proposed management measures the Council could recommend for limiting halibut removals. Remember that the Council has stated it will not adjust the recreational bag limit or season length of the charter fishery, which appear to be among the few measures that would be effective at reducing guided sport halibut removals. Further examination of the effects of area-wide moratoria and LAMPs for addressing local depletion and overcrowding may indicate that these approaches may result in more success for addressing the problems of local depletion, overcrowding, and user conflicts.

The major conclusions from this discussion paper are:

- An area-wide moratorium may be effective in limiting the halibut catch taken by the guided sport fleet at some point in the future, but likely well after the GHL has been exceeded.

- Implementation of both an area-wide moratorium and LAMP moratorium may result in regulations which conflict. If the Council prefers an area-wide moratorium on charter vessels, it may need to reconsider the inclusion of moratoria in LAMPs. A dual approach regarding moratoria will lead to a regulatory impasse. The Council/Board LAMP protocol ensures that proposals for LAMPs will occur with or without the halibut GHL. The issue of which moratorium will take precedence over the other and how the moratoria would mesh together will need to be resolved before they are developed for both LAMPs and IPHC areas.

- While moratoria may effectively address overcapitalization and crowding issues in the fleet, it may not address the stated goals of the GHL. Limiting the number of vessels that can participate in the fishery will provide the fleet little protection against reaching the GHL, because the catching capacity needed to harvest the GHL will likely qualify under any moratorium scenario.

- The Council should consider that the data are not yet available that would allow the Council to select a qualification criteria that could rationalize the fleet size (ADF&G Sportfish Division staff recommends verification of the 1998 logbook data before it is used to determine if a person qualifies for a moratorium).

- The ADF&G Sportfish Division staff have voiced strong opposition to an area-wide moratorium because the State constitution does not allow such a program to be implemented in other state-managed guided sport fisheries, and they are concerned about the anticipated ripple effects on those fisheries. The State has also expressed concern that communities are at different stages of development in terms of their involvement in the guided sport fisheries, and a broad moratorium may not meet each community's needs as well as LAMPs would. The State could support a moratorium or license limitation system on a local level (as a LAMP component), given sufficient justification.

Given these conclusions, the Council may wish to review a suggested revision of the approved management alternatives that staff believes clarifies Council intent and simplifies the language while eliminating apparent conflicts across and within alternatives. Staff would proceed with the analysis and the alternatives as structured on the next page, pending any Council redirection at this time.

SUGGESTED REVISION OF PROPOSED MANAGEMENT ALTERNATIVES

Alternative 1. Status quo. Do not develop regulations to implement a halibut Guideline Harvest Level. Local area management plans would be developed on a separate track.

Alternative 2. Convert the GHL to an allocation. The guided sport halibut fishery would be allocated 12.76% of the combined commercial and guided sport halibut quota in area 2C, and 15.61% in Area 3A. The commercial fishery would be allocated 87.24% and 84.39% of the combined quota in Areas 2A and 3C, respectively.

Option: Area-wide moratorium

Alternative 3. Under a GHL, apply a range of management measures listed above to curtail catch rates of guided anglers once GHL is attained. Apply management measures up to 2 years after attainment of GHL (1 year if data is available, but at the beginning of a year for industry stability).

- line limits
- boat limit
- annual angler limit
- vessel trip limit
- super-exclusive registration
- sport catcher vessel only area
- sportfish reserve
- rod permit

Option: Area-wide moratorium

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