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UNITED STATES DEPARTMENT OF COMMERCE
The Under Secretary for
Oceans and Atmosphere
Washington, D.C. 20230

AUG 17 1998

To All Interested Government Agencies and Public Groups:

Under the National Environmental Policy Act, an environmental review has been performed on the following action.

TITLE: Environmental Assessment for an Experimental Fishing Permit to Test a Halibut Excluder Device Installed on Trawl Gear used to Fish for Deep Water Flatfish in the Gulf of Alaska

LOCATION: Federal Waters in the Western or Central Areas of the Gulf of Alaska

SUMMARY: This action authorizes the Groundfish Forum to conduct an experiment in the Gulf of Alaska to test the effectiveness of a halibut excluder device for flatfish trawls in reducing Pacific halibut bycatch rates without lowering significantly the catch rates of flatfish. Results will be used to develop methods for trawl vessel targeting flatfish to reduce halibut bycatch rates and mortality. The Groundfish Forum estimates that 650 metric tons of groundfish may be taken by participating vessels and about 25 metric tons of halibut bycatch mortality.

RESPONSIBLE OFFICIAL:
Steven Pennoyer
Administrator, Alaska Region
National Marine Fisheries Service
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The environmental review process led us to conclude that this action will not have a significant impact on the environment. Therefore, an environmental impact statement was not prepared. A copy of the finding of no significant impact, including the environmental assessment, is enclosed for your information. Also, please send one copy of your comment to me in Room 5805, PSP, U.S. Department of Commerce, Washington, D.C. 20230.

Sincerely,

Susan Fruchter

Susan Fruchter
Acting NEPA Coordinator,

Enclosure

THE ADMINISTRATOR

ENVIRONMENTAL ASSESSMENT

FOR

EXPERIMENTAL FISHING PERMIT 98-01

TO TEST A HALIBUT EXCLUDER DEVICE INSTALLED ON TRAWL GEAR USED TO FISH FOR DEEP WATER FLATFISH IN THE GULF OF ALASKA

Prepared by

National Marine Fisheries Service
Alaska Regional Office

July 23, 1998

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1.0 INTRODUCTION

The groundfish fisheries in the Exclusive Economic Zone (EEZ) (3 to 200 miles offshore) of the Gulf of Alaska (GOA) are managed under the Fishery Management Plan for Groundfish of the gulf of Alaska (FMP). The FMP was prepared by the North Pacific Fishery Management Council (Council) under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and become effective in 1978. This Environmental Assessment (EA) addresses an experimental fishing permit (EFP) application by the Groundfish Forum to systematically test the effectiveness of a halibut excluder device in reduce halibut bycatch rates in a deep water flatfish fishery without significantly lowering catch rates of target flatfish species.

Under regulations implementing the FMP at 50 CFR 679.6, the Administrator, Alaska Region, NMFS, after consulting with the Council, may authorize for limited experimental purposes, fishing for groundfish in a manner that would otherwise be prohibited. In addition to the Magnuson-Stevens Act, such action is governed by the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA).

NEPA requires 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.

1.1 Purpose of and Need for the Action

Pacific halibut bycatch restrictions have been implemented for the Alaska groundfish fisheries that rely on the use of halibut bycatch mortality limits. Separate mortality limits are established in regulations for trawl and non trawl gear (50 CFR part 679.21) and annually are allocated to specified fisheries as bycatch allowances. Once a fishery reaches its bycatch allowance, the fishery is closed. Often, the attainment of a halibut bycatch allowance occurs before the available amount of groundfish is harvested, resulting in foregone harvest opportunity and lost revenue to participants in the groundfish fishery.

Numerous industry initiatives have been undertaken or proposed to reduce halibut bycatch rates and maximize groundfish harvest opportunity. Proposed measures currently under consideration by the Council include a halibut bycatch mortality avoidance program that would provide for timely deck sorting of halibut to increase survival rates and a system of individual vessel bycatch accountability that would increase incentives for fishermen to adopt fishing practices that reduce halibut bycatch mortality. Participants in the Bering Sea bottom trawl fisheries for flatfish voluntarily have developed an information system to distribute to the fishing fleet timely data on prohibited-species bycatch rates and bycatch hot spots so that vessel operators may use this information to attempt to reduce bycatch rates (Gauvin et al. 1996). In the program, observer data on catch and bycatch are electronically transmitted from each participating vessel to Sea State, a private contractor located in Seattle. Sea State conducts statistical expansions from observer data to calculate an average bycatch rate per vessel for each 24-hour period. Daily bycatch rates are then placed in a format where the relationship between bycatch rates and locations is accessible to vessel operators and vessel companies. Sea State relays this information to participants every 24 hours via fax or by a computer file loaded into a plotting program provided to the vessel. The goal of the program is to allow the fleet to rapidly respond (both individually and

collectively) to high bycatch rates and to reduce bycatch rates of prohibited species. Assessments of observed vessel bycatch rates in the Bering Sea yellowfin sole fishery indicate that vessels participating under the Sea State program experience significantly reduced bycatch rates compared to non-participating vessels.

Avoidance programs fall short when halibut are not concentrated into identifiable areas or insufficient data exist to project bycatch rates. In such cases, a halibut excluder device would be a more effective method of reducing halibut bycatch rates. Trawl skippers have informally developed and tested halibut excluders for years, but systematic tests of these devices have not been conducted. Informal experimentation often does not include control observations to account for variability of catch and bycatch rates. In addition, informal testing during an open access fishery frequently leads to early abandonment of the device because the vessel is at a competitive disadvantage. The benefits of formal testing with a rigorous experimental design are significant.

Halibut excluders have been tested by NMFS and other institutions (Rose 1995, Stone and Bublitz 1995). Although this research is beneficial, both studies had small sample sizes and thus limited statistical power. In addition, many of these studies were performed on nets that are different from those currently used by the industry. Furthermore, secondary codends were used to catch fish escaping through the excluder device. The extra codend itself may have effected the effectiveness of the gear.

On May 15, 1998, NMFS received from Groundfish Forum an application for an EFP to test the effectiveness of a halibut excluder device in reducing halibut bycatch rates in the deep water flatfish fisheries while not lowering the amount of target flatfish species. The application was reviewed and approved by the North Pacific Fishery Management Council at its June 1998 meeting.

1.2 Alternatives Considered

1.2.1 Alternative 1: No Action

An experimental fishing permit would not be issued. Under this alternative, any experimentation with designs for halibut excluder devices would have to occur at times when directed fisheries are open under regulations at 50 CFR 679.

1.2.2 Alternative 2: (Preferred)

Issue the proposed EFP to systematically test the effectiveness of a halibut excluder device to reduce halibut bycatch rates without significantly lowering the catch rates of target flatfish.

The EFP authorizes Groundfish Forum to solicit vessel participants through a "Request for Proposals (RFP)" process and authorizes the harvest of 650 mt of Gulf of Alaska groundfish during the course of the 10-20 day experiment during September and October 1998, of which no more than 30 percent (195 mt) may be groundfish species other than Rex sole, Dover sole, Greenland turbot, deep sea sole, flathead sole, or arrowtooth flounder (deep water flatfish). The amount of groundfish species retained other than deep water flatfish will not exceed 15 percent per species or species group (see Table 10 of 50 CFR part 679 for a definition of species groups) of the retained catch of deep water flatfish as defined in this EFP, except that the retained amount of sablefish is not to exceed 2 percent of the retained catch of deep water flatfish. Groundfish and halibut bycatch mortality associated with this experiment will not be

deducted from total allowable catch or halibut bycatch allowances specified for the 1998 groundfish fisheries.

The Regional Administrator may terminate the experiment if halibut bycatch mortality exceeds the high-end projections of the permit applicant, or 25 mt mortality (39 mt bycatch).

1.3 Background

1.3.1 Structure of the experiment

The Groundfish Forum, as applicant for an exempted fishing permit, seeks to set up an RFP process whereby companies submit applications to test a halibut excluder device. Under the rules of the experiment the performance of the device will be tested against a standard control gear. The control gear will be a net configured for deep water flatfish fishing. Trawling with experimental and control gear will be conducted with procedures and sites used during the commercial fishery for deep water flatfish species in the Western or Central Gulf of Alaska.

The RFP will set out general standards for the type of halibut excluder device that will be systematically tested against control trawl gear. Under these standards, the experimental device must:

1. Release a large percentage of the halibut that come into the trawl unharmed;
2. Avoid significant reductions in target flatfish or round fish catches, while potentially releasing less desirable species (such as arrowtooth flounder);
3. Function with few failures or break downs and be resistant to clogging and debris jams;
4. Provide for easy removal or disabling of the excluder to facilitate changes between experimental and control gear without handling difficulties or safety concerns for deck crew (this feature is especially critical for small vessels with limited deck length);
5. Provide for Durability and ease of storage on deck; and
6. Be constructed from affordable materials that are readily available.

Guidelines for applications to participate in the experiment will be provided by Groundfish Forum. Guidelines will include a description of the test and control gear as well as a statement of the rules that must be conformed to for the experiment. This information will be conveyed to potential applicants through a short publication written and distributed by the Groundfish Forum and reviewed by NMFS personnel associated with the experiment.

To ensure compliance with the experimental protocols, data from each days fishing will be sent electronically (fax or email) to NMFS personnel associated with this experiment and Groundfish Forum staff on the fishing grounds and in the Groundfish Forum office in Seattle. Forum staff will review the information and notify the NMFS and the vessel if there are indications that a vessel is not meeting requirements for participation in the experiment. If a vessel continues to violate the experimental protocols, action will be commenced to terminate that vessel's participation in the experiment.

1.3.2 Timing of the Experiment

The proposed timing for the experiment is a 10-20 day period during the months of September and October 1998. The effective date for the EFP may be revised to a date in 1999 pending agreement between the permit holder and the Regional Administrator. The September/October timing for the experiment is desirable because this period is a time when few regular trawl opportunities are available

and this will help to maximize the attractiveness of the EFP fishing time. This time is also the best window of opportunity to catch deepwater flatfish during the remainder of the 1998 calendar year.

The projected duration of the experimental fishery is based on calculations made of the number of tows of the experimental and control gears needed for reasonable statistical confidence in the results.

1.3.3 Participation

Parties interested in participating in this EFP experiment must make application through an RFP process administered by the Groundfish Forum. The process involves submission of an application which describes the halibut excluder device the applicant proposes to use and a statement that the applicant agrees to abide by the experimental protocols and other requirements as outlined in the EFP proposal. Trawl catcher processors and catcher vessels will be eligible to apply for participation. Applications for participation will be reviewed by a NMFS Selection Panel (described below).

Note: Guidelines for NMFS Exempted Fishing Permits stipulate that the name of companies and their participating vessels be listed in the application. Because this application sets up an RFP process, pre-determining participants in the application is not possible. The design of the experiment calls for two vessels to participate in the experiment.

1.3.4 Selection Panel

A Selection Panel of NMFS gear experts and other NMFS management personnel will review the suitability of applications and determine which design has the greatest potential for excluding halibut and retaining target catch. NMFS will be responsible for identifying participants for the NMFS Selection Panel.

All applicants must submit materials describing a proposed halibut excluder device to be tested. The applicant that proposes the device chosen for testing will automatically be selected for the test fishery (assuming their application meets all other criteria set out in the EFP). The second vessel for the test will be chosen randomly from the pool of eligible applicants by a random drawing conducted by the review committee. If the second participant does not want to fish with the device he did not propose, then the NMFS Selection Panel will make the opportunity available to the other applicants, in the order selected by random drawing.

Applications must include: (a) scale drawings or models of the device,(b) an explanation of how the device works and why it is believed to be effective, (c) any supporting data (observer data, underwater videos, etc.) that explains how the device has been used in the past and sheds light on the expected effectiveness of the device. Applicants must also describe their vessels' facilities (including observer sampling station), and demonstrate that the deck space is adequate for testing the device and deck sorting halibut.

In addition to the potential of the excluder device proposed for testing, the NMFS Selection Panel will consider the deck space and sampling and other facilities available on the vessel in making their determination of which vessels are selected for participation. The Selection Panel will also take into consideration the expected level of cooperation with the experimental protocol by the applicant, based on any information available from NMFS in-season managers who will be consulted in the process of reviewing applications.

1.3.5 Description of the RFP process

The Groundfish Forum will initiate a request for proposals process to invite trawl companies to submit designs for halibut excluder devices. The experiment is designed to be feasible for at-sea processors or vessels delivering to shoreside plants.

Groundfish Forum will formally disseminate application materials to all North Pacific trawl associations as well as make these materials available through the North Pacific Fishery Management Council's (Council) website. Materials describing the experiment will detail the purpose of the EFP, the "request for proposals" process, application materials required, groundfish catch and halibut bycatch limits for the experiment, a description of all responsibilities of applicants, and a description of the review process. Application materials will note that while the EFP has been approved by the Council, the EFP still is subject to final approval by NMFS. Potential applicants also will be provided a rough schedule for the fishing activities (subject to change). Applicants will have approximately four weeks to complete and submit applications from the time application materials are formally made available.

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 5. 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 that may result in changes in food availability to predators, changes in population structure of target fish stocks, and changes in community structure; (2) changes in the physical and biological structure of the benthic environment as a result of fishing practices (e.g., gear effects and fish processing discards); (3) entanglement/entrapment of non-target organisms in active or inactive fishing gear; and (4) major shifts in the abundance and composition of the marine community as result of disproportionate fishing pressure on a small set of species.

A summary of the effects of the 1998 groundfish total allowable catch amounts 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).

2.1.1 Anticipated Groundfish Mortality

The EFP proposal estimates that 650 mt of groundfish are necessary to conduct the full experiment. Based on catch composition data obtained from Sea State for at-sea vessels in the deepwater flatfish fishery, the expected species composition (principle components) of the 650 mt groundfish allocation are as follows:

TABLE 1.

Species	Anticipated catch (mt)	Percentage of catch
Arrowtooth flounder	300	46
Rex sole	214	33
Pacific Ocean Perch	97	15
Pacific cod	30	5
Other	9	1
Total	650	100

The data in Table 1 provide an example of expected species composition of the total catch under the EFP. These data are based on deep water flatfish tows and do not include tows aimed at maximizing maximum retainable bycatch (MRB) limits for that fishery. Tows with that objective would be expected to have higher percentages of sablefish (which in Table 1 are included in "other"). Given that the objective of the EFP is to assess the performance of the halibut excluder device in the deep water flatfish fishery, limits on sablefish retention for this experiment are more conservative (lower) than the current MRB of seven percent. Based on available data, sablefish catches would not be expected to exceed two percent of the retained catch of deep water flatfish, and that is the limit specified under the EFP.

Under the EFP, the amount of deep water flatfish retained would not be restricted. However, limitations are placed on the amount of other groundfish that could be retained under the assumption that these species likely will be closed to directed fishing or on prohibited species catch (PSC) status because either their directed fishing allowance or TAC amounts will have been harvested by Fall of 1998. Limited retention of groundfish species on prohibited species status is being authorized to reduce discard waste in the experimental fishery and will not result in any species being overfished (Table 2). These limits also are intended to minimize any incentive to top off retained catch of deep water flatfish with other groundfish species. Some rockfish species and sablefish likely will be on PSC status during the period of time the experiment is scheduled. Given the limitations on retention of groundfish other than deep water flatfish described in section 1.2.2 above, not all Pacific ocean perch anticipated to be caught could be retained. The maximum retained amount of Pacific ocean perch would be 68 mt [(650 mt - 195 mt)(0.15)]. The maximum amount of sablefish that could be retained will be 9 mt [(650 mt - 195 mt)(0.02)]. This amount of sablefish is small enough to minimize topping off activity while allowing for the full retention of any sablefish that are caught.

With the exception of Pacific ocean perch and Pacific cod, none of the estimated catches shown in Table 1 would be expected to exceed a total allowable catch (TAC) specified for that species. Indeed, flatfish fisheries typically close far short of the available TACs as a result of prohibited species bycatch restrictions. Table 2 displays 1998 TACs and actual landings for the species in question through mid July. TACs for all species are set well below the overfishing levels (OFLs.)

The EA prepared for the 1998 groundfish specifications (NMFS 1998) considered the environmental effects of fishing within the specified TAC and ABC levels and concluded that fishing within these levels would not threaten groundfish stocks or species dependent on them. The fishing conducted under the EFP would be outside of the 1998 TACs. However, estimated groundfish removals under the EFP likely would remain within the ABCs and not exceed the overfishing levels already considered in EA for the 1998 specifications. Fishing activity under the EFP would not threaten the affected groundfish stocks or species that depend on them.

TABLE 2.

Species	**Area**	**OFL** (GOA-wide unless noted otherwise)	**ABC**	**TAC**	**Estimated catch thru (7/11/98)**	**% TAC harvested**
Arrowtooth flounder	W	295,970	33,010	5,000	1,964	39
	C		149,640	25,000	5,907	24
Rex sole	W	11,920	1,190	1,190	288	24
	C		5,490	5,490	1,880	34
Pacific Ocean Perch	W	2,550	1,810	1,810	409	23
	C	9,320	6,600	6,600	4,884	74
Pacific cod	W	141,000	27,260	23,170	19,579	85
	C		49,080	41,720	35,791	86
Sablefish*	W	23,450	1,810	1,810	712	40
	C		6,600	6,600	3,696	56

Source: NMFS 1998 preliminary catch reports.
* Separate sablefish TAC amounts are established for trawl and fixed gear. The figures in Table 2 have combined the gear allocations to assess total mortality relative to specified ABC and OFL levels.

2.1.2 Anticipated Pacific Halibut Mortality

A maximum of 39 mt of halibut bycatch could be associated with a 650 mt harvest of groundfish in the deep water flatfish fishery. This estimate assumes a 6 percent halibut bycatch rate if the halibut excluder device has no effect relative to the control gear. If the device reduces halibut bycatch by 50 percent, then 29 mt of halibut catch would be expected (half of tows are with the excluder).

Using the Council's recommended 1998 NMFS halibut mortality rate for the deepwater flatfish fishery (64 percent), and assuming the excluder used for the experimental tows has no effect on halibut bycatch, then the experiment would result in an estimated halibut mortality of 25 mt. If the device results in a 50 percent reduction in halibut bycatch, then 18.5 mt of halibut mortality would occur assuming the deep water flatfish fishery halibut rate of 64 percent is applicable to the experiment.

Enumeration of the halibut catch will be done through a deck sorting protocol which can be expected to improve the accuracy of halibut catch estimates over basket sampling. Thus, Groundfish Forum believes that the actual mortality from the experiment will be much lower than the estimated rate for the regular fishery (64 percent).

2.2 Impacts on Endangered, Threatened or Candidate Species

The EA prepared for the 1998 groundfish fisheries (NMFS 1998) assessed the effect of the 1998 groundfish fisheries on endangered, threatened, and candidate species occurring in Federal waters off Alaska and is incorporated into this document by reference. None of the alternatives, including fishing activities under the EFP, are expected to affect endangered, threatened, or candidate species in a manner or to an extent not considered in the EA or in previous consultations on the groundfish fisheries of the GOA.

2.3 Impacts on Marine Mammals

The EA prepared for the 1998 groundfish fisheries (NMFS 1998) assessed the effect of the 1998 groundfish fisheries on marine mammals not listed under the Endangered Species Act that may be present in Federal waters off Alaska and is incorporated into this document by reference. None of the alternatives, including fishing activities under the EFP, are expected to affect marine mammals in a manner or to an extent not considered in the 1998 EA. As a result, NMFS has determined that fishing activities conducted under this EFP would not adversely affect marine mammals.

2.4 Coastal Zone Management Act

Implementation of the preferred alternative 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

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.

AUG 13 1998

Assistant Administrator for Fisheries, NOAA

Date

3.0 REFERENCES

Gauvin, J.R., K. Haflinger, and M. Nerine. 1966. Implementation of a voluntary bycatch avoidance program in the flatfish fisheries of the eastern Bering Sea. *In* Solving Bycatch: Considerations for Today and Tomorrow. Alaska Sea Grant College Program Report No. 96-03, University of Alaska, Fairbanks.

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4.0 AGENCIES AND INDIVIDUALS CONSULTED

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Groundfish Forum

Bill Karp
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5.0 LIST OF PREPARERS

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