

Application for Exempted Fishing Permit to Examine Groundfish Behavior During Capture in Bottom Trawls

A. Application Date

June 1, 2004

B. Applicant Contact

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C. Statement of Purpose and Goal

The purpose of this EFP is to identify potential species- and group-specific behaviors to develop trawl modifications for bycatch reduction in west coast bottom trawls.

D. Justification

Selective flatfish trawls incorporating very low rise and a cutback headrope have been developed for the U.S. west coast bottom trawl fishery (King et al. 2004). These trawls reduce the bycatch of some critical rockfish species, but don't decrease catch rates for some other species, such as darkblotched rockfish, lingcod or skates (ODFW, unpublished data). However, it's possible that sorting grids, or footrope or wing modifications could improve the selectivity of these trawls and decrease bycatch of some species that do not escape well from selective flatfish trawls. However, the development of these modifications depends on knowledge of behavior and vertical distribution as individuals are approached by and interact with the trawl. This research proposes to study and categorize behaviors of exploited groundfish species with the ultimate goal of developing trawl modifications that may reduce bycatch of other rockfish, lingcod or skates.

E. Significance of Results

The information collected will have a broad and timely significance for fishery management on the West Coast, and potentially in other regions because it will provide information on the efficacy of various bycatch reduction methods. Identification of potential bycatch reduction techniques will assist the PFMC in reducing bycatch of overfished species, and maintain harvest in other fisheries that cannot significantly reduce bycatch levels.

F. EFP Structure

Experiments will be designed by ODFW staff and will generally follow the methods outlined in King et al. 2004. A vessel will be chartered for personal services by the State of Oregon and will be under the direct supervision of ODFW biologists at all times while conducting experimental tows. The EFP will authorize the State of Oregon to land and sell groundfish up to the limits of overfished species listed in section H. The EFP will be valid for charter work between May 1st and October 1st in 2005 and 2006. Charters will be scheduled depending on vessel availability, research coordination, and weather. Vessels to be used are not yet known but necessary information will be forwarded to NOAA fisheries during the charter bidding process to allow violations checks to occur.

Experiments will last approximately three weeks each year and will be conducted off the coasts of Oregon or Washington to target concentrations of the appropriate target species. Fishing will occur within the Rockfish Conservation Area as several species found at depths between 75 and 150 fm will be targeted for study. The trawl gear used will be the selective flatfish trawl developed by ODFW.

G. Vessel Obligations

Vessels will be identified through ODFW's normal contract procurement process and will be under charter contract to the State of Oregon for these projects. The vessel captain will provide the knowledge, skills and experience necessary to conduct groundfishing operations in the Pacific Ocean. All fish captured under these projects are the property of the state of Oregon, but will be sold by the vessel to offset charter costs. Vessels remain able to catch and land their normal trip limits outside of this EFP project. All prohibited species will be released.

H. Catch Limits

We estimate that the research conducted will require 20 days of tows with a maximum of 10, one hour tows per day, or 200 h of trawling each year. To maintain statistical rigor but minimize catch and bycatch, we will attempt to conduct short (~1 h) tows. Using catch rates from the shelf experiments with the selective flatfish trawl, we estimate bycatch of overfished species according to the following table in 2005 and again in 2006. Note that all Pacific halibut and lingcod will be released to take advantage of their high survival rates and to minimize mortality associated with this research. We expect zero salmon catch therefore no 4d permit was required for this project.

Species	Estimated catch (mt)
Dover sole	36.25
Slender sole	1.21
Flathead sole	1.98
Petrable sole	4.23
English sole	0.83
Rex sole	9.00
Pacific halibut	17.5
Arrowtooth flounder	50.34

Pacific whiting	0.71
Sablefish	45.97
Bocaccio	trace
Cowcod	trace
Canary rockfish	0.30
Redstripe rockfish	0.20
Shortspine thornyhead	16.75
Rosethorn rockfish	1.93
Splitnose rockfish	4.12
Greenstriped rockfish	5.69
Darkblotched rockfish	8.70
Sharpchin rockfish	1.76
Stripetail rockfish	0.94
Redbanded rockfish	0.94
Pacific ocean perch	1.00
Widow rockfish	0.10
Yelloweye rockfish	0.10
Lingcod	22.15
Pacific cod	0.28
Rougheye	0.645
Yellowmouth	0.18
Longnose skate	28.54
Sandpaper skate	1.67
Spotted rattfish	3.37
Threadfin sculpin	1.00
Spiny dogfish	1.50

I. Signature of Applicant

Oregon Department of Fish and Wildlife
 Dr. Patricia M. Burke, Manager