

Application for Exempted Fishing Permit to Test a Reduced-Discard Strategy for The Deepwater Complex Fishery

A. Application Date

September 1, 2003

B. Applicant Contact

Oregon Department of Fish and Wildlife
2040 SE Marine Science Drive
Newport, OR 97365

Phone: 541 867-4741

FAX: 541 867-0311

Contacts: Dr. Patricia Burke

C. Statement of Purpose and Goal

The purpose of this EFP is to test a discard reduction strategy for the deepwater complex trawl fishery for Dover sole, shortspine thornyhead and sablefish (DTS). The strategy uses written vessel-processor, state-vessel and state-processor agreements to reduce economic incentives for discarding, mandate more complete or possibly full retention of DTS species, and create modest incentives for retention of DTS. The incentives created promote reduced discard, fewer tows, higher economic efficiency, and may be scalable to the West Coast fishery as a whole.

D. Justification

Reduced catch limits in recent years and size-related prices in the DTS fishery have created strong incentives for vessels to high-grade their catch to maximize income obtained from the reduced limits (Table 1). At the same time, any mismatch between the ratio of Dover sole, shortspine thornyhead (SST) and sablefish in the catch and the ratio of the respective limits, can create very high “regulatory” discard. These two factors, in combination, can result in very high discard rates in this fishery. Typically, low harvest limits for SST, followed by sablefish, result in high discard of these species while targeting Dover sole.

Comments from fishermen and research trawl data from the May-June period of 2003 can be used to illustrate the extent of this problem. All values presented are based on simulation modeling conducted by ODFW using actual catch data from research fishing conducted off Newport, Oregon with normal trawl gear in May 2003 in the deepwater complex fishery. Accordingly, the simulation data are considered reasonably representative of catches in the actual trawl fishery in that area at that time. Table 1 shows that to maximize ex-vessel value from the limits that were in place, a vessel can high-grade sablefish and thornyheads to land a combined catch with an ex-vessel value of about \$31,400 (Table 1). Simulations with more realistic retention of all medium and large

sablefish and thornyheads produced an average ex-vessel value of about \$30,000 for this “high-grading” scenario. These simulations suggested however, that with this realistic “high-grading” scenario, combined DTS discard rates averaged 69% of the DTS brought aboard (43,800 lbs retained, 99,000 lbs discarded). In the simulations modeled, about 80-90 tows were required to catch all limits (a short tow duration was standardized across all simulations only for comparative purposes; the number of tows would be less if longer duration was modeled).

Table 1. Example DTS limits and prices, by size grade from May-June 2003.

Species	Size	Price/lb	Catch Limit	Maximum Value
Dover Sole	All Marketable	\$0.33	31,000 lbs	\$10,230
SST	Over 16”	\$1.12	2,800 lbs	\$3,136
	10-15”	\$0.79		
	8.5-10”	\$0.42		
Sablefish	Large	\$1.80	10,000 lbs	\$18,000
	Medium	\$1.61		
	Small	\$1.48		
	Extra Small	\$0.98		
Total				\$31,366

Table 2 shows an example of how vessel-processor agreements could be used to redefine the market categories, prices, and limits to reduce discard incentives. In this example, the fish grades that are likely to be high-graded for are lumped under the existing limits for that species; in this case medium and large sablefish under the “high-value sablefish” limit, and medium and large SST under the “high-value SST” limit. The species that are likely to be graded out and discarded, but are still marketable are combined under one market category named “Low-value DTS complex” (LVDTS), which is sold at a single price (how this will work is described below under “EFP Structure”). As can be seen from Table 2, the total maximum ex-vessel value obtained from catching all of the redefined limits goes up, however this depends on the actual negotiated ex-vessel price for low-value DTS complex, which is impossible to predict (we used \$0.42/lb only for illustration, although a price somewhere between the Dover sole price and the small SST price is anticipated). More importantly though, simulation modeling shows that if the redefined limits are combined with a requirement that the vessel cease fishing for DTS when any 2 of the 3 redefined limits in Table 2 are met, discard falls to only about 11% of the DTS brought on board

(42,300 lbs retained, 5,400 lbs discarded), all of which is fish that are below the minimum marketable size. In essence, with this limit structure, “regulatory discard” of DTS is brought to zero lbs. If this approach is combined with full retention requirements for DTS, then DTS discard can be brought completely to zero, however the sub-marketable fish would likely be thrown away after landing.

The other important result from the simulation modeling is that using the redefined limits, the vessel quits fishing after only 25-30 tows, versus 80-90 tows for the “high-grading” scenario. If we assume complete mortality for discarded DTS, the population impacts on DTS species and on all other incidental species would be greatly reduced under the “redefined limits”. A side benefit of a reduced number of tows needed to reach redefined DTS limits would be reduced bycatch of other species, such as darkblotched rockfish.

Table 2. Example of redefined DTS limits and prices, based on this EFP.

Market Category	Species	Grade	Price/lb	Catch Limit	Maximum Value
Low-value DTS Complex			\$0.42	31,000 lbs	\$13,020
	Dover sole	All Marketable			
	SST	8.5-10”			
	Sablefish	Small			
	Sablefish	Extra Small			
High-value SST	SST	Over 16”	\$1.12	2,800 lbs	\$3,136
	SST	10-15”	\$0.79		
High Value Sablefish		Large	\$1.80	10,000 lbs	\$18,000
		Medium	\$1.61		
Total					\$34,156

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 feasibility and scalability of a discard reduction strategy based on altering vessel incentives for discarding fish without increasing the total mortality imposed on any stock. Reduced discard could ultimately allow for higher directed fishing limits for DTS species, and because of reduced waste, could increase economic yield from this and possibly other mixed stock fisheries where high-grading occurs.

F. EFP Structure

This EFP is a small-scale test to judge the feasibility of potential expansion to the coast-wide DTS fishery. Therefore, only one vessel in each of three ports will participate, and this test will be conducted in the March-April and May-June trip limit periods. The three test ports will be Astoria, Newport, and Charleston.

Observer Coverage

The Northwest Fisheries Science Center's Observer Program would need to provide the chosen vessels with observer coverage for all trips within the two periods. If supplied, and an observer is not available, the vessel must wait for an observer to become available. The two trip limit periods will not count towards normal observer coverage requirements. Observer coverage will be coordinated through the Observer Program.

The observer will have two tasks. First, the observer will document discard of any species, estimating weight and number discarded, as normal. Second, the observer will sample the discarded Dover sole, shortspine and longspine thornyheads, and sablefish to document size selectivity. This data will serve as a check to ensure vessels are retaining all marketable DTS species. Following the end of the field test, observer data will be error checked and provided to the Oregon Department of Fish and Wildlife for analysis.

Processor Participation

Processors will be enter into written agreements with the State of Oregon, and with the test vessel. Processors and vessel owners will be required to negotiate a single price to be paid for the LV DTS market category. The "low-value DTS complex" market category price may be re-negotiated during the EFP period, provided new written copies of the vessel-processor agreement are provided to the state. The low-value DTS category must include at least one grade of both SST and sablefish. Processors must also agree not to set separate market limits on LV DTS component species and agree to accept landings of all rockfish and DTS retained by the vessel. The ex-vessel value of catches of high-value sablefish and SST or LV DTS in excess of redefined limits will be forfeited to the state of Oregon as a legal overage.

G. Vessel Obligations

Vessels will be identified through an application process beginning in January 2004. The applicant must be the registered owner of the vessel named in the application. A total of 3 vessels will be selected to participate in the EFP fishery. The EFP fishery will be conducted from March 1 through June, 2004.

All fishing and processor activities under this EFP will be conducted subject to written agreements with ODFW, and authorization to participate in this EFP can be revoked by ODFW at any time. After a vessel is selected for the EFP program, agreements between the state and vessel owner and between the state and processor will be completed. All marketable DTS will be retained, as well as all rockfish captured (excluding longspine and

shortspine thornyheads). At the sole option of ODFW, vessel and processor agreements can require full retention of all DTS.

The vessel must agree to take an observer for all trips during the trip limit period so that data can be collected on any discard that occurs. We expect that through cooperation with the West Coast Groundfish Observer Program, we will be able to provide 100% coverage for three vessels. If the vessel operator chooses to fish without an observer, the contract with the ODFW will be terminated, and the vessel can return to fishing under normal trip limit regulations.

Vessels operating under this EFP must agree to abide by the terms and conditions of the EFP. Each participating vessel will also have a contract with the ODFW detailing the vessel's responsibilities for the EFP fishery. Failure to abide by the conditions in the contract or to follow provisions in the EFP will result in revocation of the contract and of the EFP for the year.

Vessels must retain all catch of marketable DTS and all Sebastes. If the "full retention" option is specified by ODFW, the vessel must retain all DTS captured, including all longspine and shortspine thornyheads. The vessel must agree to cease fishing as soon as any 2 of the 3 "redefined" DTS limits illustrated by example in Table 2 are met (actual limits will depend on PFMC specified limits for DTS for March-June 2004). The vessel will not be allowed to fish for groundfish for the remainder of the trip limit period. The vessel owner will be responsible (via the vessel operator) to ensure that all trip period limits are observed and tracked so that when 2 of the 3 redefined DTS limits are reached, the vessel will stop fishing and return to port. All other trip period limits remain in effect during the fishery.

H. Bycatch Limits

No increased take of any overfished rockfish species is anticipated as a result of this EFP program. In fact, due to a reduced number of hauls needed to reach redefined DTS limits, reduced bycatch of rockfish is anticipated under this EFP program.

I. Incentives

The incentive to participate in this EFP program is a modest increase in modeled revenue to the vessel and a decrease in vessel operation costs. Costs to vessels are minimal, consisting mostly of forfeited incidental catch of other species such as arrowtooth flounder and skate which would normally accumulate during the additional tows. Benefits to processors include access to more sablefish and SST catch, and the opportunity to participate in a discard reduction program.

J. Signature of Applicant

Oregon Department of Fish and Wildlife

Dr. Patricia M. Burke, Manager