

EXEMPTED FISHING PERMIT APPLICATION

OPTIMIZED RETENTION AND ELECTRONIC MONITORING FOR CALIFORNIA RISK POOL GROUND FISH IFQ VESSELS IN 2015 AND 2016

1. Date of Application: 3/14/14

2. Applicant

California Risk Pool

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Half Moon Bay Groundfish Marketing Association - Lisa Damrosch

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3. Project Partners

Environmental Defense Fund

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The Nature Conservancy

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4. Summary

This EFP application seeks exemption from the requirements at 50 CFR 660.140 (h)(1)(i)(A), requiring observers on board trawl and fixed gear IFQ fishing trips during the 2015 and 2016 fishing seasons. In place of observers, we propose to use the electronic accountability and reporting mechanisms described below as well as any additional measures the Council may require. The EFP includes approaches for both trawl and fixed gear vessels under one application. However, if for any reason the provisions applying to one of these sectors are not approved, it is our hope that the Council may view the trawl and fixed gear components as severable.

5. Statement of Purpose and Goals

Purpose:

The purpose of this EFP is create a pathway towards a viable and more cost effective means of ensuring accountability in the Pacific groundfish catch share program.

Goals:

1. Demonstrate the functionality of electronic monitoring (EM) according to the approach described
2. Identify improvements to EM systems and protocols that can be made to inform a broader regulatory approach that encompasses all segments of the groundfish fleet
3. Build comfort with EM within the industry, law enforcement, and management communities
4. "Operationalize" the lessons learned through national EM pilot studies
5. Determine how to implement electronic monitoring and accountability in a way that will provide economic relief and operational flexibility to the groundfish IFQ program

6. Justification and Broader Significance

Successful fishery management is dependent upon the collection of data from fishing activities. A robust fishery monitoring program provides data on catch, effort and bycatch to fishery stakeholders, which in turn, supports and improves stock assessments and ensures catch limits are both optimized and sustainable in the long-term. While monitoring is a necessary component of accurate catch accounting, the costs associated with fisheries monitoring can be a barrier to implementing more comprehensive monitoring programs.

The transition of the Pacific groundfish fishery to catch share management has brought considerable conservation and management benefits including significantly reduced discards and bycatch of overfished species. Fleetwide revenues under the program have also increased. A critical component of the catch share's success is 100% accountability through at-sea observers; however, the costs associated with these monitoring requirements also pose the greatest existential risk to the program. As the fleet begins to bear more of the financial burden of monitoring, smaller operations that are already on the margins of profitability may no longer be viable, resulting in socioeconomic impacts to the fishermen and their port communities. Beyond direct costs, human observers also pose logistical and operational challenges to the fleet that prevent the program from reaching its full potential. These types of impacts will have serious negative consequences for the durability and scalability of this catch share program. This is therefore not only an economic issue, but a significant conservation and management issue as well.

Finding electronic means of ensuring the accountability that human observers provide is a challenge, particularly for the trawl segment of the fleet. Adoption of EM creates genuine accountability and enforcement risks and roadblocks can be easily constructed. However, there are ways to mitigate these risks. Additionally, risks need to be compared to the broader programmatic and policy risks associated with failing to address the issue of observer costs, particularly for the non-whiting fleet. Any risk also needs to be compared to those inherent in the management of other sectors of the groundfish fleet including the recreational and open access sectors.

In an effort to mitigate accountability risks, the vessels participating in this EFP will be required to be members of the California Risk Pool. (Fishermen who are currently non-members of the Risk Pool can apply to join.) This will mean that any overfished species (OFS) caught will be covered through the terms of their membership. There will therefore be less incentive for participants to try to underreport catches. In fact, the remaining incentive will be to do whatever is needed to ensure that the EFP is carried out in a way that creates a pathway towards reduced observer costs. Additionally, in recognition of the concerns of underreporting we waive any process requirements associated with permit revocation if problems or concerns arise with the EFP. On balance, we believe that given the measures proposed in this application the benefits of moving forward with this EFP far outweigh the risks.

While the EFP would be limited in scope and number of participating vessels (approx. 6), it has much broader significance through its potential to inform an eventual regulatory package that applies across the fleet. Beyond West Coast groundfish, national EM programs are struggling to operationalize and this EFP represents an important opportunity to move EM forward in a vital fishery and in a manner that's well controlled.

This EFP will also contribute valuable data and insights, which could inform the regulatory process for implementing EM in the West Coast groundfish fishery. For the first time, a detailed cost breakdown will be available for monitoring vessels in this fishery using EM, and the contribution of individual EM components to the overall cost will be identified. This project will provide detail on the optimal design of discard areas and demonstrate the ability of EM trained analysts to accurately speciate and estimate weights for certain flatfish (see Section 9). The authors of this EFP plan to work closely with the SSC and the GMT to ensure data collection and analysis is done in a thoughtful and predetermined fashion so that it contributes the most value to EM research in general.

7. Duration

Given the amount of resources required to approve and issue an EFP, we request the permit be issued for 2 years (2015, and 2016). However, if the Council wishes to limit the EFP to a single year we request that it be for 2015.

8. Number of Vessels

We anticipate that approximately 6 vessels will participate in this EFP - 3 from the fixed gear fleet and 3 trawlers.

9. Description and Amount of Harvested Species

Target Species:

Sablefish, Dover Sole, Chilipepper rockfish, Lingcod, minor shelf rockfish, minor slope rockfish, Splitnose rockfish, Yellowtail rockfish, English sole, Petrale sole, other flatfish

Rebuilding species:

Cowcod, Canary rockfish, Yelloweye rockfish, Widow rockfish, Darkblotched rockfish, Bocaccio

The amount of these species that will be taken is difficult to estimate, however, the project partners will be providing all quota required and no request for quota pounds is being made.

10. Accountability Mechanism

Harvest limits will be complied with under a gear-specific retention plan developed for this EFP. The insurance of accountability in this EFP using EM is described in Section 11. Options considered for retention plans were drawn from the range of Alternatives for Groundfish Electronic Monitoring Policy adopted by the Council in November 2013. We chose to eliminate Alternative 1 since it would put vessels in violation of existing regulations that require release at-sea of ESA, MMPA, and other species.

This EFP will use a definition of “catch” – i.e. will describe what fish are to be counted against the vessel’s quota – based on the pending NMFS policy on this topic.

Fixed Gear Retention Plan

Fixed-gear vessels will retain all groundfish species, both IFQ species and non-IFQ species. This retention plan reflects Alternative 2: Maximize Retention of the discard alternatives with provisions intended for other gear types (i.e. midwater trawl) removed:

- i. Discards **required** for:
 - a. ESA species, MMPA species, and other protected species.
 - b. Prohibited species.
 - c. Halibut; a quota deduction will be generated by obtaining a length measurement visible to the camera using a measuring board, which will then be used to calculate weight. For pot gear, a mortality estimate will be applied based on the vessel's 2011-2013 average halibut mortality rate, as determined by the Observer Program. For hook and line gear, the mortality rate established by the Groundfish Observer Program will be applied.
- ii. Discards **prohibited** for:
 - a. IFQ groundfish species.
 - b. Non-IFQ groundfish species.
 - c. Non-groundfish finfish species.
 - d. Prohibited species.
- iii. Discards **permitted** for:
 - a. Trash, mud, coral, wood, and other debris.
 - b. Crabs, starfish, sponges and other invertebrates
 - c. Situations where human life or safety is threatened.

Shoreside Bottom Trawl Retention Plan

After consulting with fishery participants, we concluded that it would not be economically profitable for shoreside bottom trawl vessels to operate under a maximized retention plan (Alternative 2).

There are two major concerns with maximized retention for shoreside bottom trawl vessels. First, shoreside bottom trawl vessels often discard low-value, high-volume fish at-sea (often flatfish). Retaining these species could significantly impact the profitability of a vessel's fishing trip by filling the hold with low-value species. Second, even if vessels were to land these fish (which are typically undersized, unmarketable, or both), processors and/or buyers would not accept them. Ultimately, these undesirable fish would be discarded on land, resulting in additional disposal costs to the fishing vessel. We consulted with fishery participants and identified low-risk species that represent much of the low-value discards in this fishery, which are incorporated into the retention plan below. Consequently, we proposed to explore under this EFP, a limited discard or "optimized retention" option that better reflects fishing operations and needs, thereby providing a realistic model for how EM could operate in this fishery in the future. This proposal is a modified version of Alternative 3, Retention of Catch Share Species with Options:

- i. Discards **required** for:
 - a. ESA species, MMPA species, and other protected species.
 - b. Prohibited species.
- ii. Halibut; a quota deduction will be generated by obtaining a length measurement visible to the camera using a measuring board, which will then be used to calculate weight. A mortality estimate will be applied based on the vessel's 2011-2013 average halibut mortality rate, as determined by the Observer Program.
- iii. Discards **permitted** for:
 - a. Non-IFQ groundfish species that can be clearly identified
 - b. Dover sole, provided they can be adequately identified and assigned weight estimates using EM.
 - c. English sole, provided they can be adequately identified and assigned weight estimates using EM.
 - d. Arrowtooth flounder, provided they can be adequately identified and assigned weight estimates using EM.

- e. Trash, mud, coral, wood, and other debris.
 - f. Crabs, starfish, sponges and other invertebrates
 - g. Situations where human life or safety is threatened.
- iv. Discards **prohibited** for:
- a. IFQ groundfish not mentioned above, and IFQ groundfish that cannot be adequately identified by the skipper or crew and/or assigned weight estimates using EM.

It is worth noting here that many, if not all, of the trawl vessels that will participate in this EFP are also experimenting with modified trawl gear that significantly reduces their bycatch of small flatfish, often from thousands of pounds down to hundreds of pounds. Consequently, we anticipate that the catch accounting system proposed for bottom trawl discards will be used for no more than several hundred pounds of discarded fish per trip.

11. Proposed Data Collection

EM Services

An EM service provider will be selected by the California Risk Pool or its designated representatives through a Request for Proposals and a subsequent bidding process. The installation of the EMS and data analysis will be performed by the service provider or subcontracted entities.

The EMS will include the following:

- i. Secure, watertight control box for data storage.
- ii. Digital cameras that include or are connected to a date and time stamp and counter.
- iii. A minimum camera resolution and frame capture rate (to be determined).
- iv. A minimum amount of on-board data storage (to be determined).
- v. Tamper-evident hardware.
- vi. A monitor showing a live feed from all EMS cameras, so that the skipper can ensure the EMS is functioning correctly.
- vii. An electronic reporting system consisting of a device (smartphone, tablet, or computer) and software that, at a minimum, contains data entry fields and units that conform to the existing California state logbooks.

The installation and operation of the EMS will be governed by the Individual Vessel Monitoring Plan (IVMP) drafted by the service provider with collaboration from the vessel skipper. The IVMP will address the following:

- i. Hardware, including but not limited to the control box, removable hard drive, camera specifications, GPS receiver, pressure and motion sensors, and power supply.
- ii. Software for data collection.
- iii. Protocols for EMS malfunction.
- iv. Back-up equipment use protocols.
- v. Catch handling protocols.
- vi. Vessel layout and camera coverage.
- vii. Number and placement of cameras.
- viii. Lighting requirements.
- ix. Instructions for care and maintenance of the EMS.
- x. Schedule for EMS maintenance and data transfer.
- xi. Instructions for filling out and submitting electronic logbooks.

EM data capture and analysis

EM data analysis for the purpose of assessing compliance will draw on a variety of data sources, including pressure and motion sensors in fishing gear and/or on the back deck, electronic logbooks, VMS, and GPS devices, as well as the camera footage itself.

The EMS service provider selected by the California Risk Pool will:

- i. Describe and adhere to a clear chain of custody for hard drives with EM data.
- ii. Ensure the timely retrieval of hard drives from EFP vessels after every fishing trip.
- iii. Maintain confidentiality of EM data at all times.

In this EFP, quota accounting will be accomplished by cross-checking the electronic logbook against two main data sources: EM, which provides data on discards, and fish tickets, which provide data on landings. In other words, the total catch and discards of a vessel will be determined using the fish ticket plus any discard events witnessed using EM to verify the electronic logbook.

A designated discard area will be established and 100% of the discard events will be reviewed using the video footage from a camera focused on the discard location. For each of the discard events, the EM reviewer will identify the IFQ species, note its length, and calculate a corresponding weight estimate. This discard data will be compared to the vessel e-logbook.

As an additional layer of accountability, 10% of the fishing events identified in the vessel's EM video data (at least one per trip) will be reviewed. This review will ensure that no discards occurred outside of the discard area. Sensor data will be used to confirm all fishing events and trips were recorded in the electronic logbook.

Discrepancies identified during video review may include, but are not limited to, the following:

- i. Unauthorized discards: discarding species required to be retained (e.g. discarded rockfish).
- ii. Discard events occurring outside of the predetermined discard area.
- iii. Crew behavior or fish handling preventing accurate fish identification or weight estimation.
- iv. Discard event was not recorded in e-logbook.
- v. Fishing trip or event not recorded in e-logbook
- vi. The e-logbook underestimates discards by more than 10% for any species.

Concurrent observer coverage

This EFP is requesting an exemption from regulations mandating 100% observer coverage. However, some observer deployment may be instructive, to compare catch profiles with and without the observer present and to consider whether the EMS and observer have distinct effects on crew and skipper behavior. On a select number of trips, the EMS protocols will be maintained but supplemented with human observer coverage. The design of this experimental component will be developed with input from the GMT and SSC to ensure that the resulting data is informative.

Quota accounting

As long as a fishing vessel does not have a quota deficit, it may begin a fishing trip while data from a past trip is being reviewed; however, the fishing vessel may not embark on more than one subsequent EFP fishing trip until their quota account has been balanced.

Catch accounting will use three sources of data: e-logbooks, dockside monitor landing data, and data from the EM video review.

This accounting system relies on the assumption that all discards are adequately captured by the EMS (and any behavior violating this assumption would be treated as a violation, as described above).

For discarded fish, the vessel's quota account will be debited whichever is greater: the estimated weight by species from the EM video reviewer, or the recorded weight by species from the e-logbook.

For retained fish, the vessel's quota account will be debited the weight by species from the dockside monitor.

If the discrepancy between data sources – either the e-logbooks and the dockside monitor, or e-logbooks and the EM video reviewer – is greater than 10%, then a human video reviewer will watch 100% of the video from all fishing events in the trip. The vessel will be responsible for the cost of additional video review.

Compliance and penalty structure

We define an EMS failure as one or more cameras malfunctioning, and/or any loss of sufficient quality video footage during a fishing event. In every case of EM malfunction, the service provider will examine the EMS for signs of tampering. In the event of EMS malfunction, vessels may return to traditional monitoring using on-board observers in order to begin another fishing trip if desired.

The consequences of an EMS failure hinge on the tamper-evident nature of the EM equipment, the crew adhering to the care and maintenance protocols as well as the availability of video feeds available to the skipper and crew:

- i. If the EMS fails and the skipper's EM video feed shows some malfunction, the skipper must alert the service provider and immediately suspend fishing activities and return to port. The skipper may not begin another fishing trip without carrying an observer or ensuring the EMS is repaired.
- ii. If an EMS failure is noted during data retrieval and analysis, but the EM video feed had not been affected (i.e. the skipper was unaware), the vessel's quota account will be settled using the e-logbook as confirmed with fish ticket data. The quota account will also be debited an additional 5% of the fishing trip's landed pounds (of each species) to compensate for the EMS failure. The skipper may not begin another fishing trip without carrying an observer or ensuring the EMS is repaired.
- iii. *In any EMS failure*, if the service provider determines the system has been tampered with, the vessel will be penalized according to NMFS and OLE determination.

These measures and others will be codified in a contract between the EFP applicant and participating fishermen. The contract will describe possible violations and the associated monetary, quota, and participation penalties. This penalty schedule will be developed in partnership with, and to the satisfaction of, NOAA OLE. The applicant will hold all fishermen accountable to the terms of the contract. This structure will help ensure that compliance incentives are in place and that minor issues are dealt with by the EFP applicant. However, all deviations from protocol will be reported to NOAA OLE for full transparency and possible EFP revocation.

12. Vessel Selection Process

Up to 6 vessels will be selected to participate in the EFP that meet the following criteria:

The *vessel* must:

- i. Have sufficient space and ventilation for EMS hard drive.
- ii. Have sufficient power to run EMS uninterrupted.
- iii. Have or establish a designated discard area that can be monitored adequately.
- iv. Create an IVMP.
- v. If possible, have participated in a previous EM pilot project or EFP.

The *skipper/owner* must:

- i. Be engaged in and responsible for EMS deployment, troubleshooting, and implementation on their vessel.
- ii. Be willing to retrofit the vessel and catch handling operations necessary for EM deployment.
- iii. Participate in or designate a representative to participate in PFMC meetings and related workshops, representing this EFP.
- iv. Be able to re-train crew in appropriate behavior for EM.
- v. Sign a contract indicating acceptance of appropriate protocols in the case of EM malfunctions and penalties in the case of violations
- vi. Fill out and submit electronic logbooks, in addition to the currently required California state logbooks.
- vii. Must be a member of the California Risk Pool; or submit an application and be approved for membership to the Risk Pool.
- viii. Must be in “good standing” with NMFS and Risk Pool (i.e. no outstanding violations).

The following list includes all 10 vessels currently participating in the California Risk Pool, up to 6 of which may participate in this EFP. Inclusion in this list does not imply any commitment at this stage on the part of these fishermen to participate in the EFP.

- Geoff Bettencourt - F/V Moriah Lee - traps
- Steve Fitz - F/V Mr Morgan - Scottish Seine
- Bernie Norvell - F/V Donna J - trawl
- Brian Jourdain - F/V Blue Pacific - traps
- Tom Estes - F/V Tara Dawn - trawl
- Vince Doyle - F/V Verna Jean - trawl
- Bill Blue and Jon Blue - F/V Brita Michele - traps
- David Rose - F/V Nikki J - longline
- Rob Seitz - F/V South Bay - trawl
- Keith Marshall - F/V Captain John - trawl

13. Times and Places of Fishing, Type of Gear

Exact fishing locations and times will depend on the vessels that are selected, their home ports and fishing plans. The gears used will be groundfish bottom trawl gear and groundfish fixed gear. For trawl vessels, it is anticipated that fishing will occur both seaward and shoreward of the trawl Rockfish Conservation Area and with both large and small footropes. All fishing will be conducted south of Cape Mendocino.

14. Signatures



Lisa Damrosch
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John Griesser
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Michelle Norvell
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