# Preliminary Exempted Fishing Permit Application: Alternative Swordfish Target Fishing Methods and Gears

## I. Date of application.

February 9, 2015

## II. Applicant's names, mailing addresses, and telephone numbers.

The Alliance of Communities for Sustainable Fisheries (ACSF), a 501-c-3 organization founded in 2001 and based in California's Central Coast, is the principal EFP applicant responsible for overall coordination and results reporting. The Mission Statement of the ACSF is "Connecting Fishermen with their Communities".

ACSF
256 Figueroa Street, Box 1
Monterey, CA 93940
Kathy Fosmark and Frank Emerson, Co-Chairs
(831) 373-5238
KFosmark@aol.com

**Preliminary Associate Applicants and Roles would include:**

- Drift Gillnet Fishermen
  - Captain of Boat 1 Steve Fosmark
  - Captain of Boat 2 Arthur Lorton
- Shallow-set Longline Gear Fishermen
  - Captain of Boat 1 Frank Crivello
  - Captain of Boat 2 John Gibbs
- Government agencies and non-governmental organizations have been invited to contribute to project elements, including proposal review support, financial support, analytical support, or marketing support. The applicant hopes to work with experts at the National Marine Fisheries Service and California Department of Fish and Wildlife on further developing elements of this proposal before EFP fishing begins.

## III. A statement of the purpose and goals of the experiment for which an EFP is needed, including a general description of the arrangements for the disposition of all species harvested under the EFP.

The purpose of this EFP application is to test the performance of two swordfish target gear type—Drift Gillnet (DGN) and Shallow Set Long Line (SSLL) in time/area zones thought to be of high concentration of swordfish and low concentration of bycatch of protected or undesirable species when exempted from the restriction of the Pacific Leatherback Conservation Area (PLCA), in comparison to the average performance of the drift gillnet fleet fishing under existing fishery regulations.

This EFP is responsive to the Council decision to "…solicit EFP proposals to test alternative gear types or new approaches for using pelagic drift gillnet gear…", as well as the following portions of policy goal statements identified by the Council at the June 2014 Council meeting for managing a West Coast swordfish fishery under full Magnuson-Stevens Act authority.

1. "Reduce bycatch in the California drift gillnet fishery…".
2. "Support collaboration between fishing communities, agencies, scientists, and nongovernmental organizations to develop alternative fishing gears, conduct research to further minimize bycatch in the drift gillnet fishery, and… ".
3. "Evaluate future access to the Pacific Leatherback Conservation Area (PLCA)…".

Key research questions to be addressed are:

1. Can gear or other fishing practices be identified that will further reduce protected species mortality?
2. What is the difference in target catch and bycatch rates for the various gear types?
3. What is the survival rate of bycatch released from the gears, especially for blue sharks?
4. What is the general economic viability of these two test treatments?

## IV. Valid justification explaining why issuance of an EFP is warranted.

An EFP is required to 1) provide for fishing of drift gillnet gear inside the existing August 15- November 15 Pacific Leatherback Conservation Area and 2) to provide for the use of the longline gear types currently not allowed by regulation. There are a number of factors to be balanced in structuring an EFP: 1) the need to ensure sufficient opportunities and flexibility in the design of the EFP to allow participants to maximize the potential for success, 2) the need for the EFP to closely reflect operational characteristics of a real fishery, 3) the need to gather data from an area closed before significant modifications were made to gillnet gear, and 4) the need to provide the opportunity to obtain sufficient data under different scenarios to answer questions about the performance of the fishery from both a target and bycatch species perspective as well.

## V. A statement of whether the proposed experimental fishing has broader significance than the applicant's individual goals.

In the event this EFP can demonstrate superior target fishery performance by the test vessels, it is possible that the results can form the basis of management objectives and regulations that would apply to the existing drift gillnet permit holders and/or new permits for any gear type proven to be successful. If ultimately successful, a healthy West Coast swordfish fishery would reduce domestic reliance on **foreign caught** swordfish with its greater bycatch and impacts on protected species.

## VI. An expected total duration of the EFP (i.e., number of years proposed to conduct exempted fishing activities).

The EFP application is for the 2015 and 2016 fishing years (April 1-March 31), with modifications expected in 2016 based on the results of 2015. The 2015 fishing year should be viewed as exploratory towards the primary concepts of this EFP, with fuller implementation expected in 2016.

A phased approach is proposed where fewer vessels of each gear type are used in the first year, with a greater number used in 2016 if necessary to increase data volume. The triggering mechanisms for optimal time/area fishing locations are necessarily general in 2015, with additional sophistication

expected in 2016. Additional gear testing may be proposed in 2016 that would include "side-by-side" fishing of gear types within 60 NM of each other in an attempt to eliminate the area variable, towards finding a truer gear comparison test. Additional alternative gear may also be proposed for comparative testing. Any such additions to this EFP will be provided to the Council for review in a timely manner for consideration at the March, 2016 Council meeting.

A preliminary status report for the 2015 fishing year will be provided at the November, 2015 Council meeting and a draft final report is proposed to be provided at the April, 2016 Council meeting. The same Council meeting reporting schedule applies to the 2016 fishing year, staggered by one year.

## VII. Number of vessels covered under the EFP.

Two vessels of each gear type are proposed to participate in the 2015-2016 fishing seasons. Up to 10 vessels may participate in the 2016-2017 fishing season depending on results from the first year.

## VIII. A description of the species (target and incidental) to be harvested under the EFP and the amount(s) of such harvest necessary to conduct the experiment, including harvest estimates of overfished species and protected species.

The information below describes the target and incidental fish that are possible for catch in the proposed EFP. There is no specified amount necessary to conduct the EFP, but it is expected that the marketable catch will be of sufficient volume to warrant participation in the EFP. Catch of Pacific bluefin by EFP vessels will count towards the quota as established in Federal Regulations for this overfished species; the amount caught by the proposed EFP is not expected to be high enough to significantly impact the full fleet fishing opportunity. Allowable impacts to ESA or MMA protected species will be determined by NMFS at the time of permit issuance, as described below.

The table below summarizes information from the observer report from the 2013-2014 season to indicate catch and bycatch of finfish.[1] The amounts upon which this table is based are number of fish, not weight of fish. Species where the discard rate is less than 50%, indicating they are not principally a bycatch species rather are marketable species, are capitalized and bolded. Common mola is the most frequently caught species and is all bycatch. However, it has a very low bycatch mortality rate. Based on data from HMS SAFE Table 12,[2] the composition of landings by weight, 2004-2013, was swordfish 70%, common thresher shark 21%, shortfin mako shark 5%, tunas 4%, and other sharks 1%.

| Species | Percent of Catch | Discard Mortality Rate* | Catch per 100 Sets (no. of fish) |
|---|---|---|---|
| Common Mola | 37.0% | 1% | 713.1 |
| **SWORDFISH** | 13.4% | N/A | 259.2 |

[1] Observer reports available at http://www.westcoast.fisheries.noaa.gov/fisheries/wc_observer_programs/sw_observer_program_info/data_summ_report_sw_observer_fish.html

[2] Available at http://www.pcouncil.org/wp-content/uploads/HMS-SAFE-Table-12.htm

| | | | |
|---|---|---|---|
| **SHORTFIN MAKO SHARK** | 11.0% | 17% | 212.6 |
| **ALBACORE** | 10.5% | 100% | 202.1 |
| **BULETT MACKERAL** | 5.1% | 100% | 98.4 |
| **BLUEFIN TUNA** | 5.0% | 100% | 96.3 |
| **OPAH** | 4.4% | 100% | 84.8 |
| Blue Shark | 3.8% | 73% | 72.8 |
| **COMMON THRESHER SHARK** | 3.3% | N/A | 63.9 |
| **SKIPJACK TUNA** | 2.0% | 100% | 38.7 |
| Pacific Pomfret | 1.4% | 100% | 26.7 |
| **LOUVAR** | 0.9% | 100% | 16.8 |
| **PACIFIC MAKERAL** | 0.7% | 100% | 13.1 |
| **PACIFIC BONITO** | 0.5% | 100% | 8.9 |
| Unidentified Tuna | 0.2% | 100% | 4.7 |
| Pelagic Stingray | 0.1% | 0% | 2.6 |
| **BIGEYE THRESHER** | 0.1% | 100% | 1.6 |
| Megamouth Shark | 0.1% | 0% | 1.0 |
| Remora | 0.1% | 0% | 1.0 |
| Striped Marlin | <0.05% | 100% | 0.5 |
| Salmon Shark | <0.05% | 100% | 0.5 |
| Smooth Hammerhead Shark | <0.05% | 100% | 0.5 |
| Oilfish | <0.05% | 100% | 0.5 |

*Percent of discarded animals recorded as discarded dead.

Comparable data for a shallow-set longline fishery in the west coast EEZ is not available, because no such fishery has been prosecuted before. Data from the Hawaii shallow-set longline fishery may be used as a proxy. This fishery operates outside the EEZ but does seasonally make landings on the west coast. The table below summarizes catch compositions based on Table 84 in the 2012 Pacific Pelagic Fishery Ecosystem Plan Annual Report.[3] (Note that this table reports by number of fish, not by weight.) As can be seen swordfish and sharks comprise most of the catch.

| Species | Percent of Catch |
|---|---|
| Swordfish | 45.5% |
| PMUS Sharks | 35.2% |
| Mahi mahi | 8.4% |
| Albacore | 5.3% |
| Bigeye tuna | 3.5% |
| Striped marlin | 0.8% |
| Yellowfin tuna | 0.5% |
| Moonfish | 0.4% |
| Spearfish | 0.2% |

[3] Available at http://www.wpcouncil.org/managed-fishery-ecosystems/pacific-pelagic/data-collection-and-annual-reports-pelagics/

| | |
|---|---|
| Blue marlin | 0.2% |
| Ono (wahoo) | 0.1% |
| Other marlins | <0.05% |

Examining observer data for from 2010 to 2014 for the California drift gillnet fishery, California sea lions, short beak common dolphins, northern right whale dolphins, and long beak common dolphins comprise 85% of observed protected species take. This fishery is listed as a Category I fishery in the 2015 List of Fisheries pursuant to the Marine Mammal Protection Act (see 79 FR 77919). The following marine mammal stocks are listed as incidentally injured or killed in this fishery: Bottlenose dolphin, CA/OR/WA offshore; California sea lion, U.S.; Humpback whale, CA/OR/WA; Long-beaked common dolphin, CA; Minke whale, CA/OR/WA; Northern elephant seal, CA; Northern right-whale dolphin, CA/OR/WA; Pacific white-sided dolphin, CA/OR/WA; Risso's dolphin, CA/OR/WA; Short-beaked common dolphin, CA/OR/WA; Sperm Whale, CA/OR/WA. In addition, the May 2, 2013, biological opinion for the fishery lists the following ESA-listed species as potentially adversely affected: humpback whale, fin whale, sperm whale, leatherback sea turtle, loggerhead sea turtle (North Pacific DPS), green sea turtles, olive ridley sea turtles. But it concluded that the fishery would not jeopardize the continued existence of these species.

Observer data for the Hawaii SSLL is not publicly available at this time so a comparable assessment cannot be made for this fishery. This fishery is listed as a Category II fishery in the 2015 List of Fisheries pursuant to the Marine Mammal Protection Act (see 79 FR 77919). The following marine mammal stocks are listed as incidentally injured or killed in this fishery: Blainville's beaked whale, HI; Bottlenose dolphin, HI Pelagic; False killer whale, HI Pelagic; Humpback whale, Central North Pacific; Kogia spp. whale (Pygmy or dwarf sperm whale), HI; Risso's dolphin, HI; Short-finned pilot whale, HI; Striped dolphin, HI. However, since the area in which the proposed EFP fishery would operate is different these Hawaii stocks would not be encountered. In cases for west coast stocks for these species occur they could be encountered in the fishery. The February 23, 2004, biological opinion for the Hawaii SSLL fishery lists the following ESA-listed species as potentially adversely affected: green turtle, leatherback turtle, loggerhead turtle, and olive ridley turtle. The fishery operates with take caps (hard caps) for loggerhead and leatherback sea turtles. The biological opinion concluded that the fishery would not jeopardize the continued existence of these species.

At this time it is not possible to forecast which, if any, of these protected species might be taken in the EFP fishery. The applicants intend to work with NMFS to develop appropriate terms and conditions for the activity, such as hard caps, so that it would not trigger any adverse determination under applicable protected species laws.

## IX. A description of a mechanism, such as at-sea fishery monitoring, to ensure that the harvest limits for targeted and incidental species are not exceeded and are accurately accounted for.

One hundred percent human observer coverage will be required for each fishing vessel while fishing is conducted. See section XIV below for a statement on the willingness of EFP participants to carry observers and electronic monitoring equipment. Catch will be recorded by observers consistent with current protocols in place for the NMFS observer program. Marketable catch will be sold by the fishermen to licensed fish dealers and recorded on commercial fishery fish tickets.

Target species, including primarily swordfish but including other healthy HMS stocks, are not managed under annual catch limits, based on the "international exemption" at 50 CFR 600.310(h)(2)(ii); thus specifying an allocation to the EFP is not necessary. EFP vessels may incidentally catch Pacific bluefin tuna, which is subject to overfishing and overfished. Based on IATTC Resolution C-14-06, the U.S. is subject to a 600 mt catch limit for 2015-2016. Catch of Pacific bluefin by EFP vessels will count towards the quota as established in Federal Regulations.

## X. A description of the proposed data collection and analysis methodology.

Fishing will occur on vessels of each of the gear types between August 15 and January 31, the typical swordfish fishing season on the west coast.

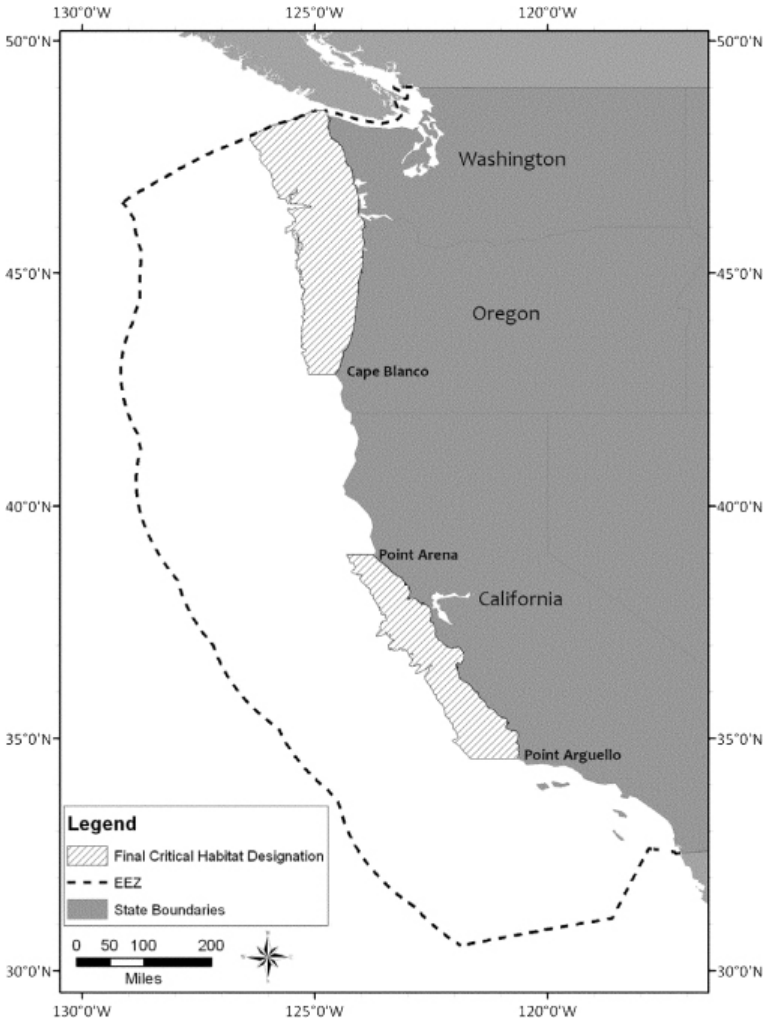
Four "treatments" will be tested based on gear type and fishing area CPUE (see below for CPUE definition). The treatments are: 1) SSLL inside Pacific Coast EEZ north of Pt. Sur (36°18.5' N. lat.), 2) SSLL south of Pt. Sur, 3) DGN north of Pt. Sur, 4) DGN south of Pt. Sur. (Pt. Sur is the southeastern boundary of the PLCA and the southwestern boundary is at 34°27' N. lat.). As discussed further below, aside from the use of pelagic longline gear inside the EEZ and permitting DGN inside the PLCA, EFP activities will comply with all other state and Federal regulations.

The primary control group against which treatments will be compared is the non-EFP DGN fleet, with the average CPUE statistics from observed trips used as the control group data. An additional control group of interest will be the Hawaii SSLL fishery operating adjacent to the West Coast EEZ and landing fish in West Coast ports. In each comparison case, a null hypothesis that there is no difference between the treatment groups and the control groups will be tested for statistical significance. A null hypothesis that there is no difference between the treatment groups will also be tested. Staff from the SWFSC will be relied upon for the statistical analysis using the various CPUE statistics examined by analysis of variance methods or other tests of statistical significance.

Catch, bycatch, and bycatch mortality data will be collected from each participating vessel. Catch, bycatch, and bycatch rates will be computed on a catch per day and catch per set-minute basis as the two CPUE statistics used in statistical analysis. These rates will be compared to the average catch and bycatch rates for the 2015 DGN fishery and for the Hawaii SSLL fishery operating outside the EEZ (for trips where landings are made in California ports). In all cases, observer data will be the source of the CPUE data. Staff from the SWFSC will be relied upon for the compilation of CPUE data used to test the null hypothesis described above.

The EFP applicants will consult with scientists that are proposed to be made available at the SWFSC and the CDFW about ocean limnological conditions that are thought to be favorable for identification of optimal time/are locations for fishing vessel activity. This would involve the use of near-real-time oceanographic data to predict general times and areas where target catch rates are high relative to bycatch rates, especially of protected species. Once a general time/area zone has been identified to be favorable, the boat captains will identify the exact time and location of EFP fishing activity, based on on-water electronics measuring water temperatures and their experience of optimizing the ratio of target species to non-target species, particularly protected species.

Pacific leatherback turtle critical habitat along the US west coast (see figure below) is a recognized sensitive area during leatherback migration and fishing in the area will be avoided.




**Leatherback critical habitat on the west coast. (Source: [http://www.nmfs.noaa.gov/pr/images/criticalhabitat/leatherback_westcoast.jpg](http://www.nmfs.noaa.gov/pr/images/criticalhabitat/leatherback_westcoast.jpg)**

## XI. Conditions to be placed on EFP activities

In addition to the general experimental design described above, the following conditions will be placed on EFP fishing activities:

- 100% observer coverage
- A limit on the number of sets made by each gear type.
    - 90 SSLL sets per vessel, August 15-January 31
    - 60 DGN sets per vessel, August 15-November 15, (November 15-January 31, PLCA is open to DGN)
- Fish with SSLL consistent with regulations for the Hawaii SSLL fishery at 50 CFR 665.813 including:
    - Use of 18/0 circle hooks with 10 degree offset
    - Use of mackerel type bait and light sticks
    - Begin the deployment of longline gear at least 1 hour after local sunset and complete the setting process before local sunrise

- Compliance with existing highly migratory species fishery management plan protected species conservation measures
- A cap on total fishing effort of no more than five trips per vessel, 20 sets per trip, no more than 400-1,200 hooks per set.

- SSLL fishing will be prohibited seaward of the coastal baseline (see figure below):
  1. U.S. Mexican border out 75 nmi bearing, 219 degrees magnetic 31 45.427' N 118 16.847' W
  2. Point Arguello out 75 nmi, bearing 180 degrees magnetic 33 21.867' N 121 00.688' W
  3. No fishing within 30 miles of the coastline from Point Arguello to Cape Falcon

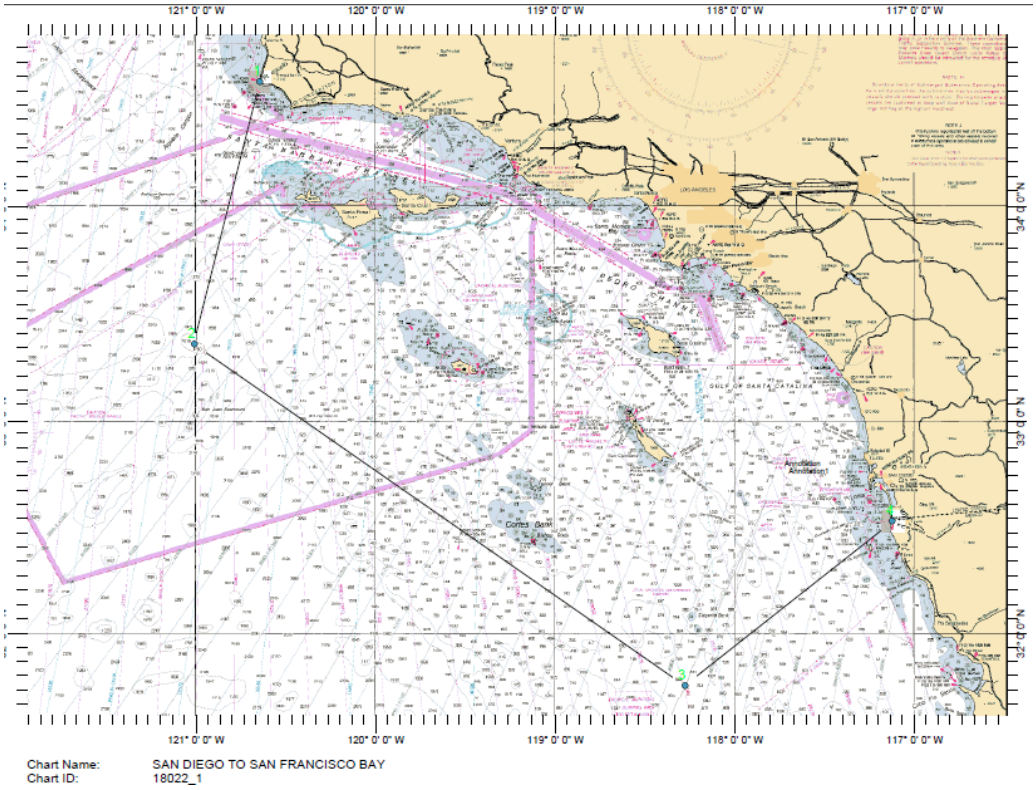



**Chart indicating boundaries described above.**

- Aside from the specified exemptions, all other Federal regulations at 50 CFR 660 Subpart K would be adhered to including:
  - Longline sea turtle take mitigation measures (660.712(b))
  - Longline seabird mitigation measures (660.712(c))
  - DGN gear restrictions (660.713(a)-(b))
  - DGN protected resource area closures other than the PLCA (660.713(c))
- Take cap for striped marlin[4]

For protected species the following conditions would apply:

[4] Pacific Leatherback Critical Habitat NOAA NMFS West Coast: http://www.nmfs.noaa.gov/pr/images/criticalhabitat/leatherback_westcoast.jpg

- Take caps consistent with any ESA Section 7 consultation for the EFP; observer will immediately report all interactions with protected species with take caps and exempted activities cease immediately if any take cap is reached.
- In consultation with NMFS Protected Resources Division staff, the applicants may identify marine mammal "hot spots" to be avoided by EFP participants.

## XII. A description of how vessels will be chosen to participate in the EFP.

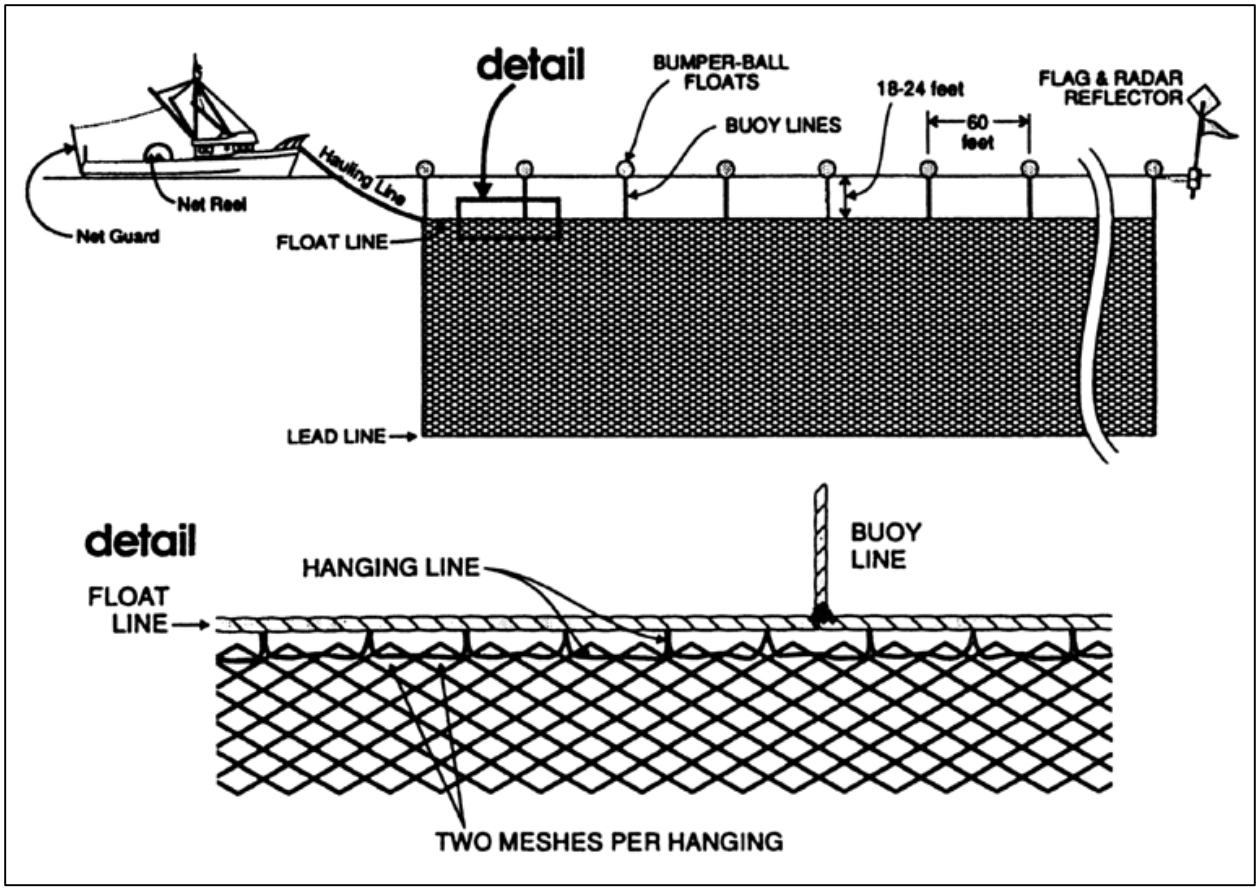
Vessels will be selected based on willingness to participate and demonstrated expertise in HMS fisheries.

## XIII. For each vessel covered by the EFP, the approximate time(s) and place(s) fishing will take place, and the type, size, and amount of gear to be used.

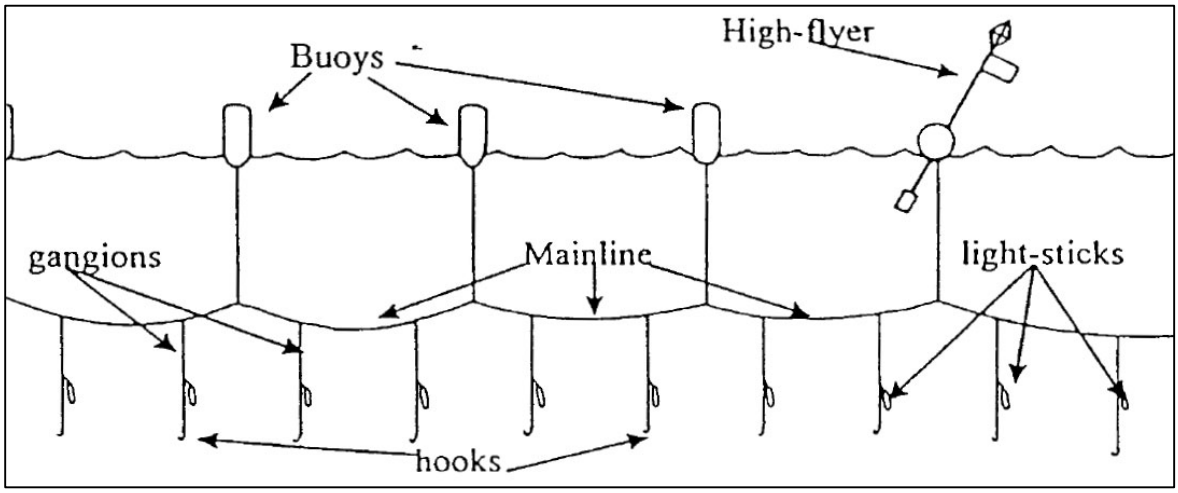
Consistent with the experimental design described above:

- Fishing will occur between August 15, 2015 and January 31, 2016, and August 15, 2016, and January 31, 2017.
- Fishing will occur within federal waters of the U.S. west coast EEZ (3-200 nmi) generally south of Cape Falcon, Oregon, with particular emphasis in areas known to have had high concentrations of swordfish in the past.
- SSLL vessels will use gear as specified in federal regulations at 50 CFR 665.813.
- DGN vessels will use gear as specified in federal regulations at 50 CFR 660.7

The illustrations below show the typical configuration of the two gear types to be used in this EFP.




**Design of typical California large mesh drift gill net.**



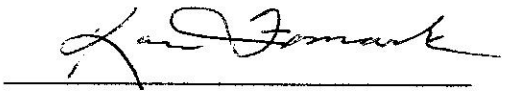

**Generalized illustration of pelagic longline gear. Shallow-set longline is defined in federal regulations as pelagic longline that is set so that the deepest point of the main longline between any two floats is at depth less than or equal to 100 m (54.6 fm).**

## XIV. Statement on observer payment and electronic monitoring willingness

Observers are proposed to be provided by the NMFS from those that are or can be made available for West Coast HMS fisheries. The applicants note that to the extent boat operators participating in this

EFP do not enter the non-EFP fishery, they have lightened the observer need for ~30% observer coverage in that fishery, perhaps providing some savings to help provide coverage for this EFP proposal. The applicants respectfully seek Council endorsement of this proposal for NMFS provided observers. Applicants will continue to explore other funding sources or methods of providing observer coverage. It is highly doubtful that EFP participants will be able to conduct the experiment if the burden of observer costs fall to them. It is a huge burden for fishermen to pay for observers. SSLL Vessel owners are not willing to take cameras if observers are used. DGN and SSLL feel 100% observers are over their budget, and expense for both exceeds the need. Vessel owners/operators who are willing to place cameras or other electronic monitoring devices on their vessels in addition to 100% human observers will only do so under the provision that participants are provided clear written legally enforceable assurance that only the data will be made public, and the actual video images will not. As a condition of this EFP, the video images will need to be made the property of the vessel owner where any video images were recorded, with no copying allowed without owner consent.

## XV. Signatures of the applicants.



(Signed)