

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

1) Basic Information

Date of application

This application was originally submitted on February 9, 2015. It has been revised and resubmitted May 14, 2015.

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".

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Number of Vessels Covered by this EFP

- Two Drift Gillnet (DGN) Vessels/Operators
- Two Shallow-set Longline (SLL) Vessels/Operators

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.

Expected duration of the EFP

The EFP activity would occur in two fishing seasons in 2016 and 2017 during the August 15-November 15 Pacific Leatherback Conservation Area (PLCA) closure period. As discussed below, the applicants may submit subsequent EFP applications based on the results of this EFP.

As required by Council Operating Procedure 20, a report on the results of 2016 fishing will be submitted to the Council at the March 2017 meeting followed by a final report in March 2018.

2) Purpose and Significance of the EFP

The purpose of this EFP is to initiate fishing with these two gear types so that over the long term their operational, economic, and environmental performance can be assessed with respect to the area fished:

- Fishing shallow-set longline gear to target swordfish will be compared inside and outside the west coast EEZ. Access to the west coast EEZ could reveal areas of higher swordfish abundance and would lower operational costs because the distance to fishing grounds would be less. Data from the currently legal Hawaii shallow-set longline fishery can be used as a point of comparison for fishing authorized inside the EEZ.
- Fishing DGN gear will be compared inside and outside the PLCA, which is an area of historically high swordfish CPUE seasonally closed to DGN vessels, to reduce the number of takes of endangered leatherback sea turtles.

Takes of protected species (sea turtles, marine mammals) are of particular concern but are rare events. Therefore, comparing performance would require a large amount of fishing effort. Since this EFP application covers just a few vessels for up to two years it is unlikely to gather enough data to reach statistically rigorous conclusions. However, this EFP can gather information to help determine whether future EFPs should be granted, with potentially higher levels of fishing effort, to continue gathering data that would allow statistically meaningful conclusions.

This EFP will attempt to reach an appropriate balance between the objectives of:

1. Providing sufficient income to participating fishermen to make the activity at least break even financially
2. Having the same characteristics as a fishery operating under regulations consistent with the exemptions described above
3. Gathering sufficient data in support of estimating differences in catch and bycatch rates in different times and areas.

This EFP responds 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)...”

This EFP would have broader significance by providing information to determine whether these gear types should be allowed to operate in the PLCA under the HMS FMP and regulations. A healthy West Coast swordfish fishery would reduce domestic reliance on **foreign caught** swordfish with its greater bycatch and impacts on protected species.

3) Reason for issuing an EFP

An EFP is required to:

1. Allow the use of drift DGN inside the PLCA during the August 15-November 15 closure period
2. Allow the use of the pelagic longline gear within the west coast EEZ, which is currently prohibited under the HMS FMP

4) Proposed data collection and analysis methodology

This EFP will gather data to begin answering the following two questions:

1. How do SLL and DGN gear perform from operational, economic, and environmental perspectives when fished in different areas given the distribution of target swordfish?
2. Can DGN gear or methods (such as choosing fishing locations based on current information about the distribution of protected species) be modified to reduce or avoid entirely gear entanglement by sea turtles and marine mammals that leads to serious injury and mortality?

As much as possible, fishing with the two gear types will occur in the same time period (i.e., on the same days) and as close to each other as feasible to compare performance under similar conditions. **To facilitate fishing under favorable conditions, for both gear types and fishing will occur , August 15-November 15.**

Catch-per-unit-effort (CPUE) by gear for all species caught will be compared between the two test areas for each gear type. For DGN fishing within the PLCA during the closure under this EFP (i.e., the test group) will be compared to the rest of the fleet fishing outside the PLCA (i.e., the control group). Similarly, shallow-set longline CPUE under this EFP (the test group) will be compared to the authorized fishery outside the EEZ.

The objective of comparing two different gear types within the current closed areas (DGN-PLCA, SLL-EEZ) with the legally operating fleets is an attempt to provide data in support of testing the hypothesis that Dynamic Ocean Management can effectively reduce the risk of protected species bycatch when targeting swordfish.

The applicants will test modifications to DGN gear, such as lengthening drop lines so the gear fishes deeper and making gear panels easier to break through by large marine mammals, to reduce the risk of entanglement in the gear. SLL gear will use methods required by Hawaii vessels proven to reduce sea turtle bycatch. With the assistance of NMFS scientists fishing will occur in times and areas where sea turtle and marine mammal takes are projected to be relatively lower. Each proposed gear modification will be tested separately on different sets so that the effects of different methods can be identified.

As noted by the Council's Scientific and Statistical Committee in March 2015, "precisely estimating bycatch rates, or determining whether alternative gears or methods have lower bycatch rates ... is likely to require many years of data collection." Therefore, we do not expect that the data from this EFP alone will be sufficient to provide answers to the above questions with a high level of statistical confidence. However, the information gathered in this EFP will provide scoping information regarding times, methods, and locations of fishing which point to successful bycatch reduction without sacrificing target species catch rates.

As noted above, depending on the results from this EFP the applicants would submit additional EFP application(s) for subsequent years. This EFP would gather basic information about the risks and feasibility of fishing with these gear types in the PLCA. This information would be used to refine the sampling design for future EFP applications. Potential modifications for a subsequent EFP include:

- Increasing the number of participating vessels
- Using more refined Dynamic Ocean Management information to determine where and when fishing would occur
- Additional gear modifications based on experience under the first EFP fishing season
- Refinement of the sampling methodology

The National Marine Fisheries Service Southwest Fisheries Science Center has agreed to assist in analyzing the data gathered through this EFP and to assist in refining sampling design for future EFPs.

5) Conditions to be placed on EFP activities

The following conditions will be placed on EFP fishing activities:

- 100% observer coverage
- Compliance with existing HMS FMP protected species conservation measures
- Making landings in Oregon or fishing in Oregon state waters would be prohibited (fishing north of 46°16' N lat., the Oregon-Washington border, is currently prohibited in regulations)
- A limit of 60 sets per participating vessel, which would be made in the EEZ (SSLL) / PLCA (DGN), August 15-November 15. In addition, for SSLL no more than 1,200 hooks per set
- 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
- SSLL fishing will be prohibited 50 miles seaward of the coastal baseline (see Figure 1)
- Fishing will not occur in designated Pacific leatherback critical habitat (77 FR 4169, January 26, 2012) (see Figure 1)
- 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 to be determined by NMFS
- For protected species the following conditions would apply:
 - 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

Figure 1 shows the boundaries of the PLCA, Pacific leatherback critical habitat, and the SLL closure line for waters within 50 miles of the coast.

6) Target and incidental species catch and catch disposition

Finfish catch under the EFP is expected to be similar to past documented catch for these gear types. 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.

Table 1. Catch and bycatch composition based on 2013-2014 observer data.

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
SHORTFIN MAKO SHARK	11.0%	17%	212.6
ALBACORE	10.5%	100%	202.1
BULET MACKEREL	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 MACKEREL	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.

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

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.² (Note that this table reports by number of fish, not by weight.) As can be seen swordfish and sharks comprise most of the catch.

Table 2. Catch composition in the Hawaii SSLL fishery.

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

Pacific bluefin tuna is designated as overfished. The Inter-American Tropical Tuna Commission adopted Resolution C-14-06, which sets a Pacific bluefin catch limit for U.S. fisheries. NMFS is currently implementing regulations consistent with this resolution, establishing commercial fishery trip limits for Pacific bluefin. The EFP would be subject to these regulations.

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 in the DGN fishery. As part of this EFP, DGN fishing techniques and gear modifications with potential to reduce mortality and serious injury to marine mammals will be tested.

Shallow-set longline gear with the current configuration to reduce sea turtle takes has not been used in the west coast EEZ so it is not known what takes would occur. The EFP application submitted to the PFMC by Pete Dupuy, John Gibbs, and David Haworth in March 2015 to test pelagic longline gear in the west coast EEZ lists marine mammals that could be potentially taken with this gear type. These include bottlenose dolphin (*Tursiops truncatus*), Risso’s dolphin (*Grampas griseus*), short-finned pilot whale (*Globicephala macrorhynchus*), common dolphin (*Delphinus delphis*), humpback whale (*Megaptera novaeangliae*), and sperm whale (*Physeter macrocephalus*). Shallow-set longline gear also takes sea turtles, although the current gear configuration used in the Hawaii fishery (circle hooks and mackerel

² Available at <http://www.wpcouncil.org/managed-fishery-ecosystems/pacific-pelagic/data-collection-and-annual-reports-pelagics/>

bait) has reduced takes substantially. Loggerhead and leatherback sea turtles would most likely be taken. Longline gear also snags seabirds. Again, current requirements for pelagic longline gear in the Hawaii-based fishery reduce these takes. Short-tailed albatross, which is listed as endangered, occasionally occurs in the west coast EEZ.

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.

Marketable fish will be sold. Unmarketable fish will be discarded.

7) Mechanism to ensure that the harvest limits are not exceeded

One hundred percent human observer coverage will be required for each fishing vessel while fishing is conducted. See section 9) 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. As noted above, NMFS is in the process of implementing trip limits for this species. The EFP would adhere to these regulations.

8) Fishing gear to be used

- SLL 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

Figure 2, Figure 3, and Figure 4 show the typical configuration of the two gear types to be used in this EFP.

9) Statement on observer payment and electronic monitoring willingness

The September 29, 2014 solicitation letter distributed by the Council states “Applicants should express their willingness to test electronic monitoring systems and their willingness and ability to pay the costs associated with observer coverage”.

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 sole responsibility of funding observers falls to them. It is a huge burden for fishermen to pay for observers. The DGN and SLL operators are very concerned about the risks of incurring economic losses if they carry the financial

burden of 100% observer coverage without supporting funds from external sources. Some of this financial risk should be absorbed by the opportunity to fish in the productive waters of the PCLA, but additional financial support is needed to execute this EFP.

SSL Vessel owners are not willing to take cameras if observers are used. 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.

10) Signatures of the applicants



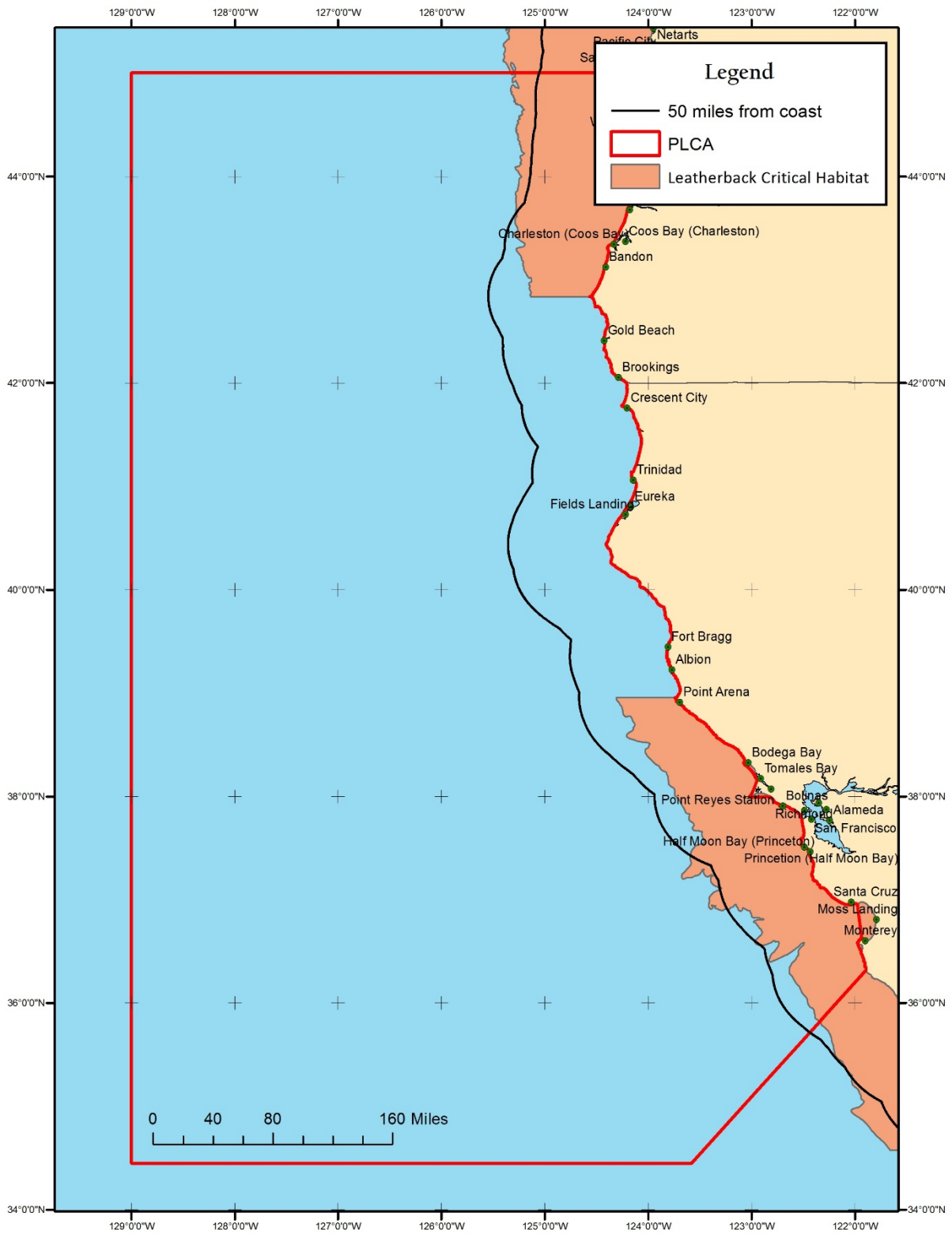


Figure 1. Map showing PLCA boundary, Pacific leatherback critical habitat, and line 50 miles from the coast (closed to SSSL).

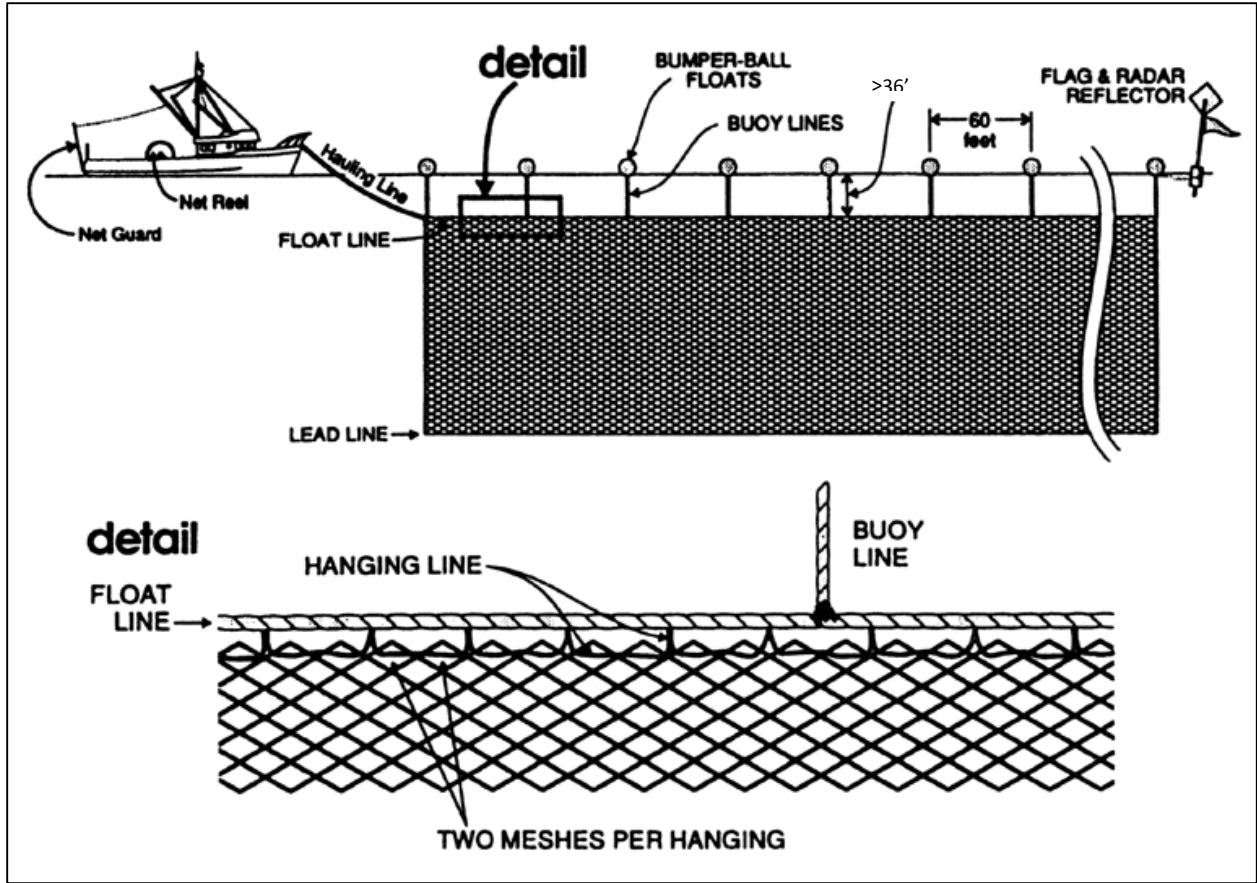


Figure 2. Design of typical California large mesh drift gill net.

