

Deep-Set Buoy Gear Exempted Fishing Permit Application Form

1. Application Date: February 1, 2017

2. Applicant:

a) Name: Denny Corbin, Phone No: (805) 451-3153

Email: dennycorbin@verizon.net

Address: 3870 Center Ave, Santa Barbara, CA 93110

Commercial Fishing Permits Held: California General Commercial
Fishing License, California Swordfish Harpoon/Hook & Line, California Ocean
Enhancement Stamp, Sea Urchin Crew Member, Alaska Salmon Troll, Alaska
CHP.

Any history of current/pending state or federal violations in a commercial fishery?
NO.

3: Number of vessels: 1

a) Vessel Name: Ray Ban Registration Number: 629892

Name of Operator: Denny Corbin

Commercial Fishing Permits Held: Market Squid Light Boat Permit, Market
Squid Brail Permit, Pacific Highly Migratory Species Permit.

Any history of current/pending state or federal violations in a commercial fishery?
NO.

4) Commercial Fishing Experience of EFP Participants:

a.1) DSBG - Years: 0 Type of Participation: N/A

a.2) Other Swordfish gear - Types(s): A few days hook and line by hand.

a.3) Other gear(s) - Type(s):

Years: 22 Type of Participation: California squid purse seine and lightboat

Years: 20 Type of Participation: Alaska longline - halibut and black cod.

Years: 25 Type of Participation: Alaska salmon troll.

Years: 25 Type of Participation: Alaska saltwater fishing guide

5) Proposed EFP duration: 2 years

Justification:

1. The purposes and goals of the exempted fishery for which an EFP is needed, including justification for issuance of the EFP.

Deep-set buoy gear (DSBG) EFPs will collect information on the performance of the gear in order to support the Council authorizing this gear type under its HMS FMP. This gear type is not currently authorized and so an EFP is required for its use. EFPs can facilitate the testing and development of alternative swordfish gears that reduce interactions with bycatch species of concern (i.e., turtles and marine mammals). DSBG has been tested off California since 2010 by the Pflieger Institute of Environmental Research. The configuration is patterned after a federally authorized fishery in Florida. Experimental trials have confirmed that (1) swordfish can be selectively targeted at depth, (2) non-target catch of species of concern are minimal, and (3) swordfish caught on DSBG are of high quality and received by southern California markets at a premium price-point.

2. The broader significance of the activity beyond the applicant's individual goals.

Issuing EFPs has broader significance because the information obtained will help the Council to design a regulatory program to authorize the gear. Regulations may address definition of the gear, parameters for use of the gear, permitting (beyond current federal permitting requirements), and time and area restrictions.

3. The species (target and incidental) expected to be harvested under the EFP and any anticipated impacts on the environment, including impacts on fisheries, marine mammals, threatened or endangered species, and EFH.

The gear is designed to target swordfish. Testing to date has explored the feasibility of catching other species including opah and marketable shark species. The gear has been shown to have minimal other environmental impacts. Additional EFPs will help to determine the expected level of impacts from an authorized fishery and the appropriate size of such a fishery.

6) Intended DSBG Configuration: Standard (Attachment A) I intend to fish the standard configuration as specified in the PIER document.

Modified: while I intend to primarily fish the DSBG Configuration I would like

permission to experiment with an alternative gear type which I am referring to as DSBG-B (see attached proposal). If this gear type is not permitted or needs further consideration I ask to be issued an EFP now for only DSBG Configured gear rather than be denied.

7) Target Species: Swordfish Incidental Species: Opah, Louvar, Tuna, Thresher Shark.

8) Fishing Area and Effort (indicate all that apply):

a) Southern California Bight (Point Conception to the US.-Mexico Border)

Yes.

i) Vessels: Ray Ban

ii) Estimate of fishing effort: 18 * 8 hour days

iii) Additional Details: Late season fishing (November-April) will likely be done in the Southern California Bite due to weather considerations. Fishing will be done between 60-80 miles from the mainland in deep water and offshore of Channel Islands, San Nicholas, SBI, Catalina and Clemente by 15-20 miles in most cases and over deep water banks and seamounts that produce sharp temperature breaks and upwelling.

b) Central California (Point Reyes to Point Conception) Yes.

i) Vessels: Ray Ban

ii) Estimate of fishing effort: 45 * 8 hour days

iii) Additional Details: as the RayBan is home-ported in Monterey our main area of fishing will be Central California. Fishing in this area will be conducted from September-November. In most cases fishing will be conducted 40-80 miles offshore in areas of deep water structure, such as between the Davidson Seamount and Monterey Canyon.

c) Northern California (42 N. Latitude to Point Reyes) Yes

i) Vessels: Ray Ban

ii) Estimate of fishing effort: 0 days

iii) Additional Details: while I intend to fish primarily in Central and Southern California we would like the option to fish in Northern California as well.

d) Oregon (Columbia River to 42 N. Latitude) Yes

- i) Vessels: Ray Ban
- ii) Estimate of fishing effort: 0 days
- iii) Additional Details: while I intend to fish primarily in Central and Southern California we would like the option to fish in Southern Oregon as well.

9) Data Gaps: Which of the following data gaps are addressed by your Exempted Fishing Permit Application, and how will they be addressed? (See Attachment B) Check all that Apply:

a) Bycatch & protected species interactions

How? Research and EFP effort to date have shown minimal bycatch in both volume and number of species. Bycatch is any fish or organism (marine mammal, sea turtle, non-marketable fish, etc.) that is not kept but discarded at sea. Additional fishing effort with the gear will provide a clearer picture of potential bycatch rates and the species involved. Bycatch rates and composition could change when fishing in new areas and times of the year.

b) Active gear tending

How? I intend to actively tend my gear by following policy already laid out by PIER research and the EFP policy. Research and EFPs have required active tending of DSBG. This requires the vessel operator keeping all pieces of gear in sight so that the gear can be retrieved quickly once a strike occurs, reducing mortality and lowering the risk of lost gear. Experience suggests a practical limit of 10 pieces of gear that can be actively tended. Questions that could be addressed through EFPs include: a. Can more than 10 pieces of gear be effectively tended (without increasing bycatch mortality and gear loss)?

b. Are there cost-effective remote monitoring technologies (e.g. drones, radio signaling) that could substitute for keeping gear in sight?

c) Gear conflicts/number of vessels

How? I do not anticipate any gear conflicts, however, while fishing I will be contemplating questions such as; what is the maximum number of vessels that can operate in a defined area such as the Southern California Bight? How far apart do vessels and gear need to be to avoid conflicts? Are there potential conflicts between DSBG and other gear types?

d) DSBG time and area use

How? To date the gear has been used almost exclusively in the Southern California Bight. Can it successfully catch swordfish and other marketable species in other areas while avoiding protected species interactions? What times of the year can the gear be used? I will be focusing the majority of my fishing time in Central California and so will glean important and useful data from this area.

e) Gear configuration

How? To date EFPs have used the standard gear configuration described in Appendix A. Are there other configurations that could increase catch volume or provide other benefits (e.g., reduce the effect of lost gear, allow remote monitoring)? While I intend to fish the standard configuration I will be considering alternative configurations and may wish to change my EFP to allow an alternative configuration in the near future. From my many years of experience fishing with baited hooks I am aware that often the way that the hook is baited makes a difference in whether the fish will strike and/or get hooked. I will be experimenting and monitoring how the baited gear performs and if slight changes make a difference in strike rates.

f) Concurrent gear use

How? Can fishermen simultaneously engage in other fishing activities (e.g., harpoon, troll) that could help make DSBG fishing trips economically viable, while effectively tending DSBG? In the case of the Ray Ban, which is primarily a light boat for squid I will be looking for squid while targeting sword fish. Searching and lighting for squid happens at night and so during the evening hours when I am not fishing DSBG gear I will be lighting squid if the opportunity presents itself. As the DSBG gear is lightweight, simple and doesn't take up much space on board I anticipate DSBG fishing to nicely compliment squid fishing.

10) Reporting Requirements: The proposed EFP will use log books and at sea observer records to track the course of all EFP deployments. The at sea sampling protocol will follow closely the procedures and guidelines utilized by the NMFS Observer Program to assess and monitor current DGN activities. I will be responsible for the daily completion of detailed logbook templates that will be collected each month throughout the fishing season. The logbook data fields will include target and non-target catch, size, disposition, hook depth, bait type, set and haul position, soak time, sea surface temperature, and any additional observations.

All data will be maintained in an Access database (Microsoft 2010) and metadata will be provided directly to the PFMC HMS advisory bodies and the California Department of Fish and Wildlife (CDFW). Findings will be periodically presented to the PFMC and its advisory bodies.

I have read and agree to abide by all conditions in Attachment C: Example Terms and Conditions

These example terms and conditions are intended to help the applicant understand the federal requirements that have applied to previous DSBG EFPs. NMFS will specify terms and conditions for each EFP issued, which may differ in specifics from those described below, based on the contents of your application and recommendations made by the Council. The states of California and Oregon may have additional requirements for EFP activities within their waters or landing into their ports.

A. SCOPE

1. These Terms and Conditions apply to all fishing activities under the EFP referenced above. In addition to all the terms and conditions in this document, the person or entity named on the EFP application is responsible for instructing all fishing permit holders, vessel owners, vessel operators crew members and processors, concerning the terms and conditions of the EFP permits.
2. The EFPs exempt the permitted vessel(s), for limited purposes described in this permit, from the prohibition on unauthorized fishing gear which would otherwise be prohibited by 50 CFR 660.705(a) and (c) provided the vessel(s) use deep-set buoy gear as described in the application and further specified in these terms and conditions.
3. Jointly and Severally Liable. The person or entity named on the EFP application will be jointly and severally liable for compliance with the terms and conditions of this EFP by each vessel and for all persons aboard the vessel while participating in the EFP project. The person who has signed the EFP assumes responsibility on matters related to issuance and management

of the EFP, including serving as EFP holder on behalf of any entity named in the application.

4. All other provisions of 50 CFR Part 660, Subpart K, and other applicable laws of the states of California, Oregon, and Washington that relate to fishing for, landing, and processing of Pacific swordfish and other marketable HMS species apply to fishing activities conducted under this EFP.
5. Failure to comply with these terms and conditions will be grounds for revocation, suspension, invalidation, or modification of the EFP with respect to all parties, persons, vessels, and processors conducting activities under the EFPs referenced above.

B. EFFECTIVEDATES

1. These terms and conditions are effective when the EFP is signed by the NMFS West Coast (WC) Regional Administrator, the EFP holder/manager, and the authorized representative of the HMS permit owner under which fishing will occur. If the EFP is signed by the NMFS WC Regional Administrator and the EFP holder(s) on different dates, then the effective date is the later of the three signature dates.
2. The terms and conditions on the EFP will specify the effective start and end dates, and may be terminated or modified at an earlier date by NMFS.
3. The EFP may be terminated or modified earlier by regulatory action pursuant to 50 CFR Part 660, Subpart K or by revocation, suspension, or modification pursuant to 15 CFR Part 904, or successor regulations, or by the terms and conditions of this permit.

C. PERMITCONDITIONS.

1. The exemption provided by this EFP is valid only for the vessels listed on the EFP. The vessel name, documentation number, and EFP number will be listed in the terms and conditions.
2. All EFP fishing trips by the permitted vessel(s) must be conducted in accordance with the permit and associated terms and conditions and are limited to federal waters only.
3. This EFP is not transferrable to another holder, entity, vessel, or vessel owner.
4. A copy of the EFP must be carried on board the vessel(s) while conducting fishing activities under this EFP and whenever fish caught while fishing under the EFP are onboard the vessel.
5. The original EFP permits with original EFP holder signatures must be returned to NMFS West Coast Region (WCR) Long Beach, California, office upon expiration, revocation, or suspension.

D. OBSERVER REQUIREMENTS

1. The EFP holder is responsible for ensuring placement of NMFS-trained observers on board participating vessels. NMFS will determine the appropriate coverage level on a case-by-case basis, based on a recommendation from the Council. Observer coverage rates shall be monitored over the fishing year season by EFP holder and, if applicable, shall be distributed proportionately across all participant fishing vessels. Information in the preliminary and final reports for each fishing year shall be the basis for calculating the overall observer coverage rate.

2. Observers will collect all data elements on the forms as specified by NMFS WCR.
3. Requirements for observers found at 50 CFR 660.719 apply to fishing under this EFP.

E. FISHING RESTRICTIONS

In accordance with 50 CFR 600.10, "Fishing, or to fish" means any activity, other than scientific research conducted by a scientific research vessel, that involves:

- (1) The catching, taking, or harvesting of fish;
- (2) The attempted catching, taking, or harvesting of fish;
- (3) Any other activity that can reasonably be expected to result in the catching, taking,

or harvesting of fish; or

- (4) Any operations at sea in support of, or in preparation for, any activity described in

paragraphs (1), (2), or (3) of this definition.

1. Fishing is prohibited in waters north of the Washington/Oregon marine border, a line extending seaward of the coast at 46° 15 minutes N latitude. The terms and conditions will specify the area where fishing will be allowed.
2. Fishing with deep-set buoy gear is limited to federal waters during the day. All vessels must initiate haul-back procedures by sunset. Deep-set buoy gear may not be modified in any way to fish shallow at night.

3. No fish may be transferred to or from the vessel(s) operating under this permit. Fish caught by other authorized HMS gears (e.g. harpoon, drift gillnet) on the same vessel must be kept separate and distinct for reporting and landings receipts. Each vessel shall only retain fish caught on gear it has deployed, tended and retrieved.
4. The terms and conditions will specify the maximum number of days per year per vessel the EFP may be used to fish, with a maximum of 10 sets of gear deployed simultaneously per day.
5. A single set of deep-set buoy gear may contain no more than a single weighted line with up to 3 hooks that may be soaked for up to 8 hours each day.
6. All hooks in the deep-set buoy gear must be deployed below the mixed layer (>90 m) with a maximum of 3 hooks to target swordfish and other marketable HMS species at depths of 250 – 400 meters. (One hook may be placed at greater than 90 m depth, and up to 2 hooks may be placed at depths of 250 – 400 meters). Each set will use 16/0 or 18/0 circle hooks with squid or mackerel bait, or artificial baits.
7. The deep-set buoy gear will use a minimum of a single 3 kg lead weight that minimizes slack in the line and maintains the gear in a vertical orientation. Strike indicator floats will be used to detect 'hook-up' and allow for the immediate gear servicing upon a 'strike'. A 'strike' is when a fish or other animal has taken the baited hook, and a 'hook- up' is when the fish or other animal is attached to the line via the hook.
8. Deep-set buoy gear must be deployed as quickly as practicable, and the

vessel must be proximal to the gear at all times (<3nm) to minimize impacts to any non-target species.

9. The operator of the fishing vessel operating under this EFP must actively tend all gear at all times, and must maintain the gear within sight (<3nm from any one piece of gear) of the EFP participant fishing vessel.

F. REPORTING REQUIREMENTS

1. It is unlawful to fail to report catches as required while fishing pursuant to an EFP (50 CFR 600.725(l)). Failure to maintain the required documents may result in a vessel's and/or EFP holder's inability to obtain a future EFP permit.
2. **Fishing Activity Reports.** 24 hours prior to commencing a fishing trip during which EFP activity is expected to be conducted, notice of vessel name and anticipated fishing dates must be made via email to the NMFS West Coast Region and California Department of Fish and Wildlife (CDFW) or Oregon Department of Fish and Wildlife (ODFW), if applicable. The terms and conditions will list primary contacts in these agencies. Within 24 hours of port landing and cessation of any EFP fishing trips, notice of vessel name and EFP fishing dates must be made via email to the NMFS West Coast Region and CDFW (or ODFW, if applicable) primary contacts listed in the terms and conditions.
3. **Landings Reports.** All fish tickets must have a unique identifier (to be specified in the terms and conditions) written in the notepad area of the landing receipt to assist CDFW (or ODFW, if applicable) reviewing biologists, and allow proper EFP coding into the PacFIN landings database. Fish caught by other authorized HMS gears (e.g. harpoon, drift gillnet) must be kept separate in the vessel hold and reported on separate landings receipts marked with the correct gear codes. Within 7 days of landing DSBG caught fish, a photocopy or image of the fish ticket must be sent via email to

designated NMFS and CDFW contacts.

4. **Annual Preliminary and Final Reports.** The EFP holder/manager must present a preliminary report on the results of the EFP and the data collected (including catch data) to NMFS WCR in each year of the EFP in advance of the Briefing Book deadline for the June meetings of the Pacific Fishery Management Council (Council).
5. A final written report on the results of the EFP and the data collected must be presented by the EFP holder to NMFS WCR, the Council, and the Council's HMS Management Team, at a Council meeting to be specified in the terms and conditions.
6. The final report must include:
 - (1) A summary of the work completed, including observer coverage rate and distribution of observer coverage across all participant fishing vessels; (2) An analysis of the data collected;
 - (3) Conclusions and/or recommendations;
 - (4) Any other information specified in the terms and conditions;
7. **Public Release of Information.** The fishing activities carried out under the EFP are for the purpose of collecting information. The vessel owner(s), operator(s), and EFP holder/manager agree to the public release of any and all information submitted to NMFS pertaining to activities conducted under the EFP.

G. PROTECTED SPECIES INTERACTIONS

1. All vessel operators shall undergo a safe handling and release workshop conducted by the NMFS WCR Protected Resources Division prior to beginning fishing under the EFP.
2. Fishing is prohibited within designated Pacific leatherback sea turtle critical

habitat.

3. For any Endangered Species Act (ESA)-listed species entanglement or hooking, the EFP permit holder will report the species and its release condition to the NMFS point of contact via email or phone within 24 hours after every EFP trip.
4. If a single ESA-listed species is taken while fishing under the EFP, then fishing will cease by all EFP holders operating under the EFP until granted authorization to resume fishing from NMFS WCR, which in no event will be before NMFS completes a formal ESA section 7 consultation on continued operation of the EFP.

H. SANCTIONS

Failure of the vessel owner(s), operator(s), EFP holder, or any person to comply with the terms and conditions of this permit, a notice issued under 50 CFR Part 660, Subpart K, any other applicable provision of 50 CFR Parts 600 and 660 Subpart K, the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq.) (Magnuson-Stevens Act), or any other regulations promulgated thereunder, may be grounds for revocation, suspension, or modification of this EFP as well as civil or criminal penalties under the Magnuson-Stevens Act with respect to all persons and vessels conducting activities under the EFP (50 CFR 600.745(b)(9)).

I. WAIVER

The EFP holder on his/her own behalf, and on behalf of all persons conducting activities authorized by the permit under his/her direction, waives any and all claims against the United States or the State, and its agents and employees, for any liability whatsoever for personal injury or death related to fishing under the EFP.

11) Observer Coverage:

x I acknowledge that observer coverage may be required on up to 100% of my EFP fishing trips, and verify that I am willing and able to cover the cost of such coverage.

Denny P. Corbin Denny Corbin

If you are unable to cover the entire cost of the observer coverage requirement, please explain what portion you may be able to cover and identify other sources of funding which may be available to help you cover observer costs.

I am willing to cover the cost of up to 100% observer coverage but would rather not absorb the expense entirely as this fishery has yet to be proven economic. I will be applying for observer funding via NOAA/NMFS, West Coast Region. However, at this time NOAA/NMFS has limited funding for observer coverage. I will also be investigating the potential to reduce observer expense by installing an Electronic Monitoring and Reporting system in the hopes that it can become an affordable alternative.

12: Application(s) Signature:

Date

Denny P. Corbin
2-19-2017

Modified Gear Proposal DSBG-B:

The Modified DSBG-B gear will conform as closely as possible to DSBG gear as laid out by PIER research in that the depth, hook size, number of hooks, type of line and leader, length of leader, weight of lead, buoy size, speed of deployment and any other pertinent factors are the same. This will be done so that the two gear types can be compared as closely as possible to determine effectiveness of one over the other.

The difference and possible improvements between DSBG and DSBG-B are:

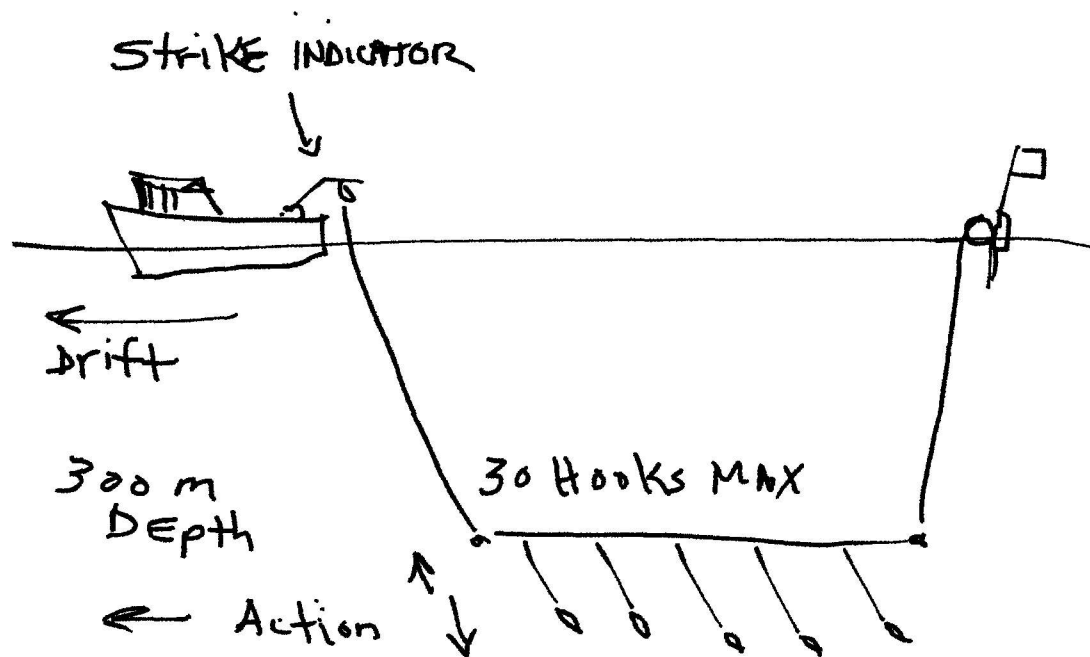
1. The gear will lay horizontally vs. vertically. After studying PIER DSBG research it appears that the bottom hook produces better than hooks above. I surmise this is because the hooks above are laying against the main line and fish are shy of the mainline. In DSBG-B configuration the gear will lay horizontal and so each hook will be a bottom hook in open water free from the mainline.

2. As the vessel will be moving with wind and current and DSBG-B gear is

attached to the vessel it will "drift" which will give the gear "action" which I hope triggers more bites. Fish strike on instinct. It is not know what the exact set of conditions are that trigger a bite but often as not action in the gear will help trigger a strike instinct. As the boat will be moving with the wind and current it will pull the gear and provide this action as well as a "pulsing" effect if there are swells or wind chop.

3. Drifting will allow the vessel and gear to efficiently "cover ground" as any wind or current will move the boat along over many miles. When a bite happens the vessel may run back up in to the wind or current and try the drift again. This type of fishing can also save fuel as the gear remains attached to the vessel making running from set to set to check for bites unnecessary. The possibility of lost gear will also be greatly reduced as the gear always remains attached to the vessel.

4. Any fish that bite, even small strikes, will be noticed immediately due to a bell and spring used as strike indicator. The fish will be brought up quickly and released if a bycatch species. When in an area of forage fish it may be possible to notice small strikes as an indicator of productive ground which in turn will help with tuning the fish finding equipment to see layers of deep water bait.



As stated earlier in this proposal, if DSBG-B is not acceptable I would rather be issued a permit now to start fishing the DSBG Configuration only and perhaps submit a different gear configuration at a later time than be denied the permit outright.

Attachment A: Specification of Standard DSBG Configuration

The following description is based on the gear description in the February 1, 2015, PIER EFP application (Agenda Item H.3.a, Attachment 2, March 2016). See also C. A. Sepulveda, C. Heberer, and S. A. Aalbers. 2014. Development and Trial of Deep-set Buoy Gear for Swordfish, *Xiphias gladius*, in the Southern California Bight. *Marine Fisheries Review* 76(4): 28-36.).

DSBG configuration

The DSBG configuration consists of a three- float system which includes two

strike-indicator floats (3.2 kg) and one 36 cm diameter (21 kg), non-compressible longline float. The configuration also includes a hi-flyer locator flag and a radar reflector or strobe to prevent gear loss (see diagram below). Collectively, each piece of DSBG includes from 270 to 320 m of monofilament mainline rigged with 1-3 monofilament gangions.

Gear may contain up to three monofilament gangions branching from the mainline, all of which must be positioned at depths below 100 m (see diagram below). Gangions are to be constructed of monofilament (no-wire) with a single 18/0 circle hook (Mustad model 39960D) baited with either squid or mackerel. Battery-operated illumination may be used at the juncture of the mainline and gangion. One or two of the branching gangions are used to target swordfish at depths between 700 and 1200m. A third optional hook can be fished at >90m to target opah and common thresher shark when available.

One full set of DSBG is defined as 10 individual pieces of gear deployed simultaneously (maximum of 30 hooks/set).

Gear Deployment

DSBG is deployed along a maximum horizontal distance of 6 km. Once deployed, DSBG is continually monitored visually and vessels must remain within the immediate area (<3 nm) of any one piece of gear. All gear must be labelled with the vessel's name, official number, or other designation as specified by NMFS.

