

**HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON
AUTHORIZATION OF DEEP-SET BUOY GEAR AND FEDERAL PERMITTING**

Introduction.....	1
Proposed Action.....	2
Purpose and Need	2
Action Area.....	2
Alternatives.....	3
No Action Alternative.....	3
Gear Description Alternatives.....	3
Definitions:	3
Additional Considerations:	4
Alternatives discussed but not further considered:	4
Geographic Area Alternatives.....	4
Other Considerations:	4
Alternatives discussed but not further considered:	4
Permitting Alternatives	5
Other Considerations:	6
Alternatives discussed but not further considered:	6
Gear Tending Requirements	7
Species Retention Alternatives	8
Use of Multiple Gear Types on a Trip	8
Alternatives discussed but not further considered:	8
Fishing Season	8
Other Considerations	9
Permit Assignment:.....	9
Permit Transfers:.....	9
Permit Durability:	9
Observer Coverage:.....	10
Allowed Bait Species:.....	10
Training Requirements:.....	10
Summary	10

Introduction

At its March 2016 meeting under Agenda Item F.3, the Pacific Management Council (Council) passed a [motion](#) to move forward with developing a range of alternatives (ROA) to authorize a deep-set buoy gear (DSBG) fishery concurrent with continuing to collect information through exempted fishing permits (EFPs). At the March 2017 meeting, the Council tasked the Highly Migratory Species Management Team (HMSMT) to develop a ROA for DSBG authorization and report back in June 2017. The HMSMT provides this preliminary ROA and other fishery authorization considerations for the Council’s review.

The development of a full ROA covering all aspects of authorizing a brand new fishery is an extensive process and requires evaluation of numerous components and unforeseen and complex situations. Considering such complexities, the HMSMT felt the most thorough and expedient approach would be to consider and present all potential options that have thus far been brought forward as possible alternatives for developing a DSBG fishery. Some of these options have been discussed and weighed by the HMSMT to not be viable options, and have therefore been included as alternatives discussed but not further

considered. The rest have been included as alternatives or as considerations for the Council to keep in mind as development of the fishery moves forward. In considering this report and the ROA, the HMSMT requests that the Council weigh each alternative/option and narrow down the array of choices (and/or add any additional that were not included but that the Council wishes to see) so that the HMSMT can refine the ROA for the September 2017 meeting without expending resources on alternatives that will not be further considered.

The HMSMT would like to first propose a change in terminology when referring to this type of gear, in order to maintain consistency, prevent confusion when discussing the fishery further, and allow the Council to establish one permit for multiple gear configurations. Firstly, deep-set buoy gear (DSBG) would be an overarching gear type and would refer to multiple configurations. The Council and the National Marine Fisheries Service (NMFS) would authorize, permit, etc. a DSBG fishery. Under the umbrella of DSBG, there is standard buoy gear (SBG) which has thus far been referred to as DSBG or “traditional” buoy gear. Parallel to SBG is linked buoy gear (LBG) that the Council has recently approved for EFP testing. Any additional gears the Council feels fall under the definition of DSBG could similarly be given their own designations. Additionally, this report references “generic” configurations of both SBG and LBG, which are simply non-prescriptive versions of each gear configuration that would allow for unregulated design and modification.

Proposed Action

The proposed action is to authorize a DSBG fishery targeting swordfish and other highly migratory species under the Fishery Management Plan for West Coast Fisheries for Highly Migratory Species (HMS FMP). DSBG would be identified as a legal commercial fishing gear in the FMP and pursuant regulations. Management measures for the fishery could be established in the FMP or in Federal regulations under the FMP’s management framework.

Purpose and Need

The purpose of the proposed action is to encourage the use of a fishing gear in the West Coast commercial swordfish fishery that minimizes bycatch and bycatch mortality of finfish and protected species (including sea turtles, marine mammals, and seabirds) to the extent practicable while allowing for the fishery to remain economically viable. Research and exempted fishing trials with DSBG have demonstrated that this innovative gear type has minimal protected species interactions and finfish bycatch. Economic viability encompasses support for a swordfish fishery conducted by vessels with West Coast home ports, and increased availability of locally-caught swordfish in the market.

The proposed action is needed as a component of a West Coast swordfish fishery that effectively addresses the 10 national standards for conservation and management enumerated in the Magnuson Stevens Act, Section 301, in particular [National Standards](#) (NS) 1 (optimum yield) and 9 (minimize bycatch). DSBG is also needed as a commercially viable addition to the suite of legal swordfish gear types, to provide sustained participation in the swordfish fishery by West Coast fishing communities. In doing so, authorization of the fishery would also address NS 8.

Action Area

The action area for authorizing a DSBG fishery is the U.S. Exclusive Economic Zone (EEZ; from 3 to 200 nautical miles) off the coasts of California, Oregon, and Washington.

Alternatives

No Action Alternative

DSBG would not be authorized as a legal gear under the HMS FMP. Swordfish are currently targeted using fishing gears authorized for use and managed under the HMS FMP, including harpoon and drift gillnet. The Hawaii shallow-set longline fishery also lands swordfish and other HMS to West Coast ports. If DSBG is not authorized, these gears would remain as the primary fishing gears supplying swordfish to the U.S. West Coast.

Gear Description Alternatives

1. SBG (10 pieces maximum, 30 hooks maximum)
2. SBG + LBG (10 pieces maximum in combination, 30 hooks maximum)

Definitions:

Standard Buoy Gear (SBG) - An actively tended vertical gear configuration that is designed to target west coast highly migratory species. An individual piece of SBG consists of a vertical monofilament mainline suspended from a non-compressible float (>45 lb. flotation) and strike indicator float system that uses a minimum 3.6kg weight to expedite sink rate and facilitate strike detection. A collective gear set includes ten individual pieces of gear that can fish up to three hooks each (30 total hooks maximum; minimum size 16/0 circle hooks) that must be positioned below 90m deep when fishing. Each piece of gear must also include a locator flag, a radar reflector and vessel/fisher identification.

Linked Buoy Gear (LBG): An actively tended gear type in which two or more pieces of standard buoy gear (SBG) may be linked together by means of a horizontal monofilament mainline; gangions are connected to this horizontal line, not the vertical lines. Serviceable links between each LBG section are suspended at a minimum depth of 11m meters (36 feet) below a non-compressible float system (>45 lb. flotation) that allows for strike detection (based on SBG design standards). No more than 30 hooks (minimum size 16/0 circle hooks) can be deployed simultaneously and all hooks must be fished below >90m. No more than 10 sections of LBG may be used at one time and the overall horizontal footprint of the gear must be less than 5nm. Terminal buoys must include a locator flag, a radar reflector, and vessel/fisher identification.

	PIER LBG	Traditional longline
Horizontal footprint	3 to 5 nm	40-50 nm
Hook count	30	600-1,000
Tending	Active tending	Overnight soak/no tending
Hook depth	Below 250m	Surface
Time of set	Day	Night
Strike detection	Yes	No
Serviceability	Yes	No
Weighted vertical legs	Yes	No

Figure 1. Comparison of Linked Buoy Gear and Pelagic Longline Gear

Additional Considerations:

If the Council would like to consider both SBG and LBG as two different configurations under one gear type, and under one permit (Alternative 2), Alternative 2 could be adopted and fishing with the LBG configuration to begin at a later time after sufficient EFP activity and data has been collected and analyzed and the Council has deemed the configuration ready to be used in the commercial fishery. This would allow for authorization of SBG at this time and LBG at a future point without the need for two separate actions.

Alternatives discussed but not further considered:

Standalone standard LBG, generic SBG, generic LBG, and paired generic SBG and LBG alternatives were discussed but not further considered. The HMSMT felt that LBG would likely not be authorized singularly, as it has yet to be tested through the EFP process, without the co-authorization of SBG. Likewise, it was felt that a more “generic” configuration of both gear types, which would allow for unregulated modification and unknown gear and bycatch concerns, would not be viewed favorably without the rigorous testing process the Council has undertaken with the current gear configurations being considered under the EFPs.

Geographic Area Alternatives

1. All Federal waters (3-200 nm offshore) of U.S. West Coast (CA + OR + WA)
2. All Federal waters (3-200 nm offshore) of California + Oregon

The HMSMT discussed the intent of the initial Council motions which limited the scope of the EFP action to waters off California (please see language under Alternatives Discussed But Not Further Considered). In maintaining this intent, the HMSMT felt that the only two alternatives for geographic area of the proposed DSBG fishery would be those listed above. Even though no EFP activity has occurred north of central California, the HMSMT considered it administratively inefficient, unlikely to have substantively different provisions, and detrimental to development of a DSBG fishery in more northern areas if a fishery in these areas were authorized in a separate, future action.

Other Considerations:

In addition to general Federal/state waters boundaries, the HMSMT also discussed the potential application of a minimum bottom depth for use of DSBG. Such a restriction would ensure gear was being utilized to target intended species (swordfish and other HMS) and would reduce the likelihood of modifications to the gear configuration to fish unintended species such as groundfish, minimize potential contact with the seafloor and unintended species, etc. **It was suggested that the 150 fathom contour would provide a reasonable and enforceable depth restriction that would allow for the gear to be utilized properly.**

Alternatives discussed but not further considered:

In the amendment California offered to the motion at the March 2016 meeting, the area considered for authorization of DSBG was extended from “where it has been tested under one or more of the EFPs” to “Federal waters off California”. Following the intent of this amendment, the HMSMT did not further consider alternatives for only the Southern California Bight (SCB) or the SCB and Central California.

Additionally, discussions at the HMSMT meeting in April 2017 suggested that Oregon may be open to authorization of DSBG in Federal waters off its coast, so the alternative considering only Federal waters

off California was also removed from the list. **However, the HMSMT anticipates further guidance from the Council on any specific aspects for implementing the fishery off Oregon.** For example, authorizing the fishery in specified areas could be conditional on some specified level of EFP fishing effort occurring first. The same type of condition could be applicable to Washington as well.

Discussion during the NMFS listening session held on April 17, 2017, and the HMSMT meeting also explored inclusion of California state waters (1-3 nm) around the Channel Islands in the geographical extent of allowed DSBG fishing area. However, after input provided by state representatives, the state of California does not support the inclusion of any state waters in the scope of DSBG fishery authorization. The state processes to evaluate such an allowance would be extensive and time consuming, and there is concern over the DSBG configuration being modified in such a way that it would be used to target species other than HMS. **However, should the Council want to explore this option, the HMSMT requests that there be explicit direction to do so.**

Finally, the HMSMT considered the possibility of excluding leatherback sea turtle critical habitat and the Pacific Leatherback Conservation Area (PLCA). The PLCA is a time/area closure specific to DGN gear and the HMSMT does not see a need to exclude DSBG from this area. If the Council adopts a gear definition that requires a minimum depth of the first gangion at 90m, the HMSMT sees no reason why exclusion from critical habitat, which extends down to 80m, or from the PLCA would be necessary, as DSBG is designed to reach depth quickly and to avoid sea turtle interactions.

Permitting Alternatives

1. Open Access
2. A ceiling on total permits with a phase-in approach to permit issuance
 - First round of issued permits to DGN permit holders?
 - Second round of permits to EFP participants?
 - Third round to harpoon permit holders?
 - Landings requirement?
3. Limited Entry (LE) with qualification criteria, such as;
 - a) DGN permit
 - Current possession of state/Federal permit?
 - DGN landings requirement?
 - How many years?
 - b) Harpoon permit
 - Current possession of harpoon permit?
 - Harpoon landings requirement?
 - How many years?
 - c) EFP
 - Current (or future) possession of permit?
 - DSBG landings requirement?
 - How many years?
 - d) Control date¹
 - Permit possession?
 - Landings after control date?
 - For harpoon or DGN?
 - e) “Lottery” (for new additions)
 - What criteria used for lottery participation?

¹ A control date has not been set for this action. The Council has the option to adopt a control date at its June 2017 meeting or at a later time.

4. Geographic Limited Entry (GLE)
 - a) All of California LE, Oregon and Washington open access
 - b) Southern California Bight (SCB) LE, the rest of California, Oregon, and Washington open access

Open Access: Given the results of DSBG research and EFP trials to date, it is likely that permitting for a DSBG fishery would default to open access unless specifically limited by certain criteria.

Permit ceiling/phase-in: Under this option the Council would identify an overall limit on the number of permits that will be issued. Permits would be issued in several phases based on specified criteria. This would allow the Council to assess how much fishery participation actually occurs and the associated impacts after each phase of issuing a tranche of permits. Based on this assessment, Council could decide whether to issue permits to the next eligible group.

Limited Entry: Should the Council decide that any part of, or the entire DSBG fishery should be LE, there are several aspects to the LE permit system that need to be considered and addressed. These are:

1. Justification for the limitation
2. Area to be limited
3. Number of permits
4. Criteria for eligibility (2a - 2e, above)

Geographic Limited Entry: For this approach, it is assumed that observer coverage would be required on early effort in non-EFP tested areas until NMFS requirements are met.

Other Considerations:

When considering an LE permit approach to the future DSBG fishery, EFP participation has been mentioned as a potential criterion for permit issuance. However, the Council has yet to specify how many EFPs (or vessels) it would like to consider for collecting information to satisfy each previously identified data gap. Without an estimation of potential EFP issuance and effort, it is difficult for the HMSMT to evaluate the use of EFP participation as a potential parameter for future participation in the fishery. The HMSMT seeks guidance from the Council on the number of EFPs (or vessels) it would like to consider with regard to LE permit eligibility. **The Council may wish to specify the number of EFPs to be issued for SBG configuration fishing in the SCB solely or concurrently with harpoon/troll gear, and potentially for other data gaps.**

In considering the economic aspect of permitting a future DSBG fishery, an approach that allows for a gradual growth in fleet size or in supply of fish (since DSBG-caught fish is a premium product) would allow for a market to develop alongside the fishery without flooding it and dropping the price per pound of DSBG-caught fish. This may become even more of a consideration once LBG has completed its EFP phase and is ready to be fished full scale in an authorized fishery.

The HMSMT intended to include a summary of the expected number of permits based on LE criteria listed above, but due to workload and time restrictions was unable to do so prior to the advanced briefing book deadline. However, a supplemental report will be made available that will summarize this information as soon as possible.

Alternatives discussed but not further considered:

The HMSMT discussed other qualifying criteria for an LE (or partial LE) permit. These included any history of swordfish landings (including gears other than DGN or harpoon) and exchange of a drift gillnet

(DGN) permit for a BG permit. The first was dismissed as DSBG was developed as a supplemental gear to harpoon, and potentially smaller DGN vessels, fishing out of West Coast ports in the U.S. EEZ. It was felt by fishery participants in the room that landings made by large longline vessels or incidentally in other fisheries should not be used as a criterion for issuance of a permit in an LE fishery.

The option of a voluntary or mandatory trade-in of a DGN permit for a DSBG permit has been brought forward numerous times. While this approach seemingly addresses multiple considerations in one action (qualifying criteria in one fishery and permit latency in another), it is similar in nature to that of issuing DSBG permits to longline vessels in that it extends the participant pool beyond the scope of who the gear was designed to supplement – participants in the current West Coast swordfish fisheries in the U.S. EEZ. Allowing DGN permit holders to trade in those permits for a DSBG permit which they have no intention of fishing so that they can turn around and transfer it to someone with no experience in the fishery is unfair to current swordfish fishermen and EFP participants.

Another approach that was mentioned was that of area registration as is used to manage the Atlantic lobster fishery. While such an approach might provide a means of controlling geographic access as new information becomes available through EFPs, and is an adaptive approach, it would require more resources for management. Additionally, the approach is successful for lobster as they are not migratory and are also managed by trip limits, trap limits, and quotas, whereas potential target species are by definition highly migratory; also the main species targeted by DSBG (swordfish, opah, thresher) do not have catch limits or quotas, making management by such a method unequitable and difficult.

Gear Tending Requirements

At the March 2017 Council meeting, the Enforcement Consultants (EC) made the following recommendations regarding actively tending DSBG:

1. “Actively tending” definition: The fishing vessel must maintain a distance of no more than 3nm from any piece of gear and maintain properly configured gear in accordance with their EFP.
2. Each piece of SBG and the terminal ends of LBG must be marked with a radar reflector. Flags and buoys must be marked with the vessel’s official number.

The HMSMT generally supports the EC’s recommendation as an appropriate active tending definition for an authorized DSBG fishery, but feels that it would be necessary/beneficial for the EC to give the definition further consideration, such as whether it would be suitable for areas where SBG has not yet been tested. Also the EC should consider the need to specify a total “footprint area” over which the entire extent of all ten pieces of buoy gear may be spread at any one time. Establishing a maximum footprint would prevent a vessel from maintaining the required three nautical mile distance from a single piece of gear while the remaining pieces could be any number of miles further away. While the HMSMT feels that the EC and HMSAS would be the best advisory bodies to determine a reasonable footprint area, discussion with EFP participants at the NMFS listening session and the HMSMT meeting in La Jolla in April 2017 suggest that 5 to 6 nm would be acceptable.

The EC may consider adding language to the definition of active tending that allows vessels to concurrently participate only in other fishing activities that do not inhibit their maneuverability, to allow active tending of DSBG and/or staying within the boundaries of the active tending boundary.

Additionally, EFP participants expressed concern that a requirement to start retrieving gear by sunset would potentially lead to citations as the retrieval process could be lengthy, especially if there was catch on one of the pieces of gear. **The HMSMT suggests the Council request the EC work with the**

HMSAS and DSBG EFP participants in clarifying this tending requirement, including requirements related to daytime gear deployment, so that both sides are secure in their understanding of any requirements.

Species Retention Alternatives

1. All species may be retained except species currently prohibited in the HMS FMP.
2. All species may be retained except HMS FMP prohibited species and additional species of concern.

Additional Considerations:

While discussions between the HMSMT, EFP participants, and Pflieger Institute of Environmental Research (PIER) researchers minimized concerns over targeting of non-HMS species such as groundfish by fishermen fishing DSBG as intended, the HMSMT recognizes that certain restrictions may be necessary to manage those with different intent. The HMSMT feels it would be beneficial to seek input from other advisory bodies (GMT, EC, etc.) as well as the Council, as to what other prohibited species may be appropriate for the DSBG fishery, noting that prohibiting certain species may hinder concurrent gear use on trips, create grey areas for enforcement, and otherwise limit the productivity of the fishery. **The HMSMT asks whether requirements for separation of catch by gear type or incidental catch allowances for non-HMS species would be sufficient in addressing any concerns.**

Use of Multiple Gear Types on a Trip

The HMSMT concluded that the requirement to actively tend DSBG would naturally limit the gears with which fishermen could concurrently fish (maneuverability to allow for active tending of gear and/or staying within the boundaries of the active tending boundary). It was also noted that there is a clear distinction between gear types that can be fished concurrently and those that can be fished on the same trip but at distinct times. Some gears can be set and retrieved on the way out to and returning from sea, and DSBG fished in between, potentially at a large distance from the concurrent gear. However, DSBG could not be set and then another gear be deployed that takes the vessel out of active tending range while DSBG is in the water. This is a distinction that the HMSMT feels the EC should be comfortable with when further considering the definition of active tending and allowed gears.

Alternatives discussed but not further considered:

Use of a limited selection of additional gears as well as a complete prohibition of concurrent gear use with DSBG was discussed but not further considered. While the HMSMT identified a couple of possible reasons for limiting gear to a single gear per trip (catch accountability, VMS, fishing in prohibited areas), DSBG was originally developed as a complementary gear to harpoon, and the Council has expressed a desire to explore the feasibility of concurrent gear use within multiple fisheries.

Fishing Season

As stated in [June 2016, D5 Attachment 1](#), the HMS FMP and regulations (50 CFR 660.709(b)) establish a fishing season for all species beginning on April 1 and ending March 31 of the following year. Dr. Sepulveda of PIER expects that the DSBG may operate in summer months when deliveries of swordfish to market from other fisheries slows, but swordfish abundance off the West Coast increases in the fall and winter. At this time there is no information that suggests anything other than a year round season is necessary for management purposes (stock conservation, bycatch mitigation, etc.). If necessary to address unanticipated impacts, additional time or area restrictions could be implemented through the

biennial management process after the management program is in place.

Other Considerations

Permit Assignment:

1. Assigned to individual with the vessel specified on the permit.
 - Permit owner does not have to be the vessel owner.
 - Specified Vessel can be changed (such as DGN LE permit).
2. Assigned to the vessel.
3. Assigned to the vessel owner, as is the current HMS permit.

The permit could include an “owner on board” requirement (like the current state DGN permit). Owner on board requirements are usually established to discourage “share cropping” arrangements where permit possession allows rent extraction.

The HMSMT would like to note that if a permit is issued to the vessel, the landings can still be attributed to an operator who does not own the vessel.

Permit Transfers:

1. Freely transferable
2. Transfer provisions based on fishing activity

The HMSMT spent time discussing the potential transferability of DSBG permits. While the HMSMT does not feel it is a component that must be immediately addressed, it is an aspect to permitting with multiple facets that must be considered. Fishery participants present at the HMSMT meeting in April 2017 felt strongly about this topic and had many ideas to address it. **This being the case, the HMSMT suggests that it may be beneficial for the HMSAS to develop some approaches to permit transfers that they feel would address any concerns related to an alternative, such as the age of the fleet when discussing time restrictions before transferring.**

Permit Durability:

1. Year to year issuance
 - Could aid in finding the “optimal capacity” as number of permits could be adjusted yearly
 - In order to renew, must demonstrate effort (either in catch or number of sets; yearly or over multiple years)
 - If not met, permit can be reassigned to someone on a waiting list (ranked by qualifications) or given out based on a lottery system
2. Permit doesn't expire
 - Must make at least one landing within [5] years of permit issuance or permit will expire
 - Council could conduct a comprehensive review at [5] years and could establish additional criteria necessary to retain a permit
 - Criteria could include minimum landings requirement (if not specified at the outset), landings frequency (e.g., landings in n of n years), area of catch/port of landing. (When discussing potential criteria the HMSMT wondered whether there is an equity issue with not specifying all criteria at the time of permit issuance.)

Observer Coverage:

Existing HMS FMP regulations governing observer coverage (50 CFR 660.719) establish a requirement that any HMS permitted vessel must accommodate a NMFS certified observer if required by the agency. The level of observer coverage is thus left up to agency discretion. Any observer requirement represents a trade-off between gathering data on the fishery and the cost of observer deployment. Generally, observers are used to verify bycatch of finfish and protected species, because retained catch is monitored dockside. Observers may carry out other scientific duties such as collecting biological data (lengths, aging structures, etc.) and opportunistic sightings of species of interest (e.g., marine mammals). In weighing the costs and benefits, NMFS often does not require observers in a fishery, such as the surface hook-and-line fishery for North Pacific albacore. This fishery has demonstrably very low bycatch so it is difficult to justify the cost of observers. Another consideration is whether the agency or the industry bears the cost of observers. Given the envisioned scale of a DSBG fishery, expecting industry to pay a substantial portion of any observer cost is likely to jeopardize the economic viability of the fishery.

Allowed Bait Species:

The HMSMT considered a limitation on bait species, such as not allowing squid bait as is done in certain shallow-set longline fisheries. This restriction is a measure aimed at reducing sea turtle interactions, but research and EFP results to date have shown that DSBG reaches depth quickly and fishes below sea turtle preferred habitat, and therefore poses very little risk to sea turtles. The HMSMT felt that there should be no squid bait restriction for DSBG and that the Council should also recommend allowing the use of artificial lures.

Training Requirements:

Does the Council feel that there should be any training requirements for new participants in the future DSBG fishery? Does this apply to all permit holders, or only those with no gear experience?

It will be important to clearly convey the purpose and intent of the gear to help new entrants better understand DSBG's function, the need for active tending, etc. Would word of mouth and fishing experience on active tending and information on how to set and retrieve a buoy suffice?

Input from EFP participants, industry, and NMFS will be important in assisting the Council in making this decision.

Summary

The HMSMT requests that the Council:

1. Consider whether to adopt the HMSMT's proposed gear terminology.
2. Provide guidance on the number of EFPs (or vessels) it would like to consider for the original application parameters of SBG configuration fishing in the SCB solely or concurrently with harpoon/troll gear.
3. Specify whether or not to include a bottom depth (150 fm contour or other) limitation in further alternatives.
4. Task the EC to work with the HMSAS and DSBG EFP participants regarding requirements around sunset gear retrieval.
5. Task the HMSAS with developing alternatives for permit transferability.
6. Provide guidance to further develop the range of alternatives for potential adoption at the September Council meeting as indicated in the current draft agenda.

PFMC
05/12/2017