

## HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON DEEP-SET BUOY GEAR AMENDMENT SCOPING

### **1. Introduction**

Deep-set buoy gear (DSBG) has been developed by the Pflieger Institute of Environmental Research (PIER) specifically for use off the U.S. West coast to selectively target swordfish and opah, and other marketable highly migratory species (HMS). The design, based on gear used by a federally authorized fishery off Florida, uses depth distribution data from target and non-target species on the west coast to minimize potential interactions with protected species. Prior to the issuance of an Exempted Fishing Permit (EFP), PIER completed three experimental trials that indicated under the conditions and areas tested 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 ([Agenda Item H.3, Attachment 2](#)).

DSBG is a relatively simple hook-and-line gear configuration that selectively targets swordfish at depth during the day. The PIER configuration uses a heavy weighting system along with circle hooks and strike indicators to minimize protected species interactions, and to minimize the severity of such interactions should they occur.

In addition to authorization of the PIER EFP, National Marine Fisheries Service (NMFS) issued EFPs for DSBG to two other applicants, one of which has conducted three days of gear testing with their permit. Authorization of DSBG for these three separate EFPs was beneficial, as they each offered the potential for collection of unique information. The participants in the PIER EFP were actively trained in use of the gear by researchers. Fishing activities were also supervised, and effort was concentrated in the Southern California Bight. The other two EFPs may provide information on variability of outcomes due to use of the gear by new fishermen, both those who mainly fish with harpoon, and those who fish DGN. Additionally, one of these two EFPs proposed testing the gear in waters north of the area where PIER activities were conducted. This may provide a larger data set, and allow for the beginnings of spatial examination of gear effectiveness. These EFPs are authorized through December 31, 2016.

In December 2016, NMFS issued a Letter of Acknowledgement (LOA) to PIER for research of a new gear configuration similar in many aspects to DSBG (see Agenda Item F.1, NMFS Report). This gear, preliminarily deemed “H-gear” or “linked deep-set buoy gear” is composed of several individual units of similar setup to DSBG, but linked to one another near the surface by short detachable lines which allow for the servicing of individual sections. This gear is still in the most preliminary stage of research, but is hoped to offer a higher yield while maintaining low bycatch levels.

### **2. Council Action to Make DSBG legal under the HMS FMP**

An amendment would be required to authorize the gear under the HMS FMP. Per MSA Sec. 303(a)(2), required provisions of an FMP, “...contain a description of the fishery, including, but

not limited to the number of vessels involved, the type and quantity of fishing gear used...”. Federal regulations then establish the actual legally enforceable requirements.

### Gear Definition and Initial Management Measures

Gear definitions in the FMP are fairly brief; see section 6.1.1 in the FMP for existing definitions of legally authorized gear to target HMS. Federal regulations include legal HMS gear definitions at 50 CFR 660.702. HMS FMP section 6.2 describes specific conservation and management measures by fishery. Federal regulations at 50 CFR 660.712 through 660.716 contain fishery-specific measures.

Based on the existing contents of the FMP and regulations, the gear definition should be a fairly general description of the physical characteristics of the gear. Additional requirements and restrictions on the operation of the gear would go in the fishery-specific conservation and management measures sections in the FMP and regulations.

#### *Draft Definition*

Deep-set buoy gear: A vertical mainline suspended in the water column from a non-compressible float system that allows strike detection, free-drifting, and from which up to three gangions with hooks are attached at depths greater than 90 m ( below the thermocline and targeting 250-400 m). Gear also includes a locator flag and a radar reflector or flashing strobe to minimize loss, and the gear must be “actively tended” or available for immediate servicing upon an animal taking the hook.

#### *Potential Management Measures*

The following potential management measures are adapted from the terms and conditions for the HMS EFP issued to PIER for 2015/2016. These could be the starting point for developing regulatory measures for an authorized fishery.

1. Fishing could be limited to Federal waters and prohibited in waters north of the [Washington/Oregon marine border, a line extending seaward of the coast at 46°15' N. latitude / Oregon/California marine border, a line extending seaward of the coast at 42° N. latitude].
2. Fishing with deep-set buoy gear is to be conducted during the day (1 hour prior to sunrise to 1 hour after sunset) only. Deployment or retrieval of deep-set buoy gear is prohibited at night (from 1 hour after sunset until 1 hour before sunrise).
3. A maximum of 10 pieces of gear may be deployed simultaneously per day, per vessel.
4. A single piece of deep-set buoy gear may contain no more than a single weighted line with up to 3 hooks attached to branchlines positioned in accordance to specifications below.
5. 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. (One hook may be placed between 90 m depth and 250 m depth, and up to 2 hooks may be placed at depths of 250 – 400 meters.) All deep-set buoy gear will use 16/0 or greater circle hooks with squid or mackerel-type bait, or artificial baits.

6. Each piece of deep-set buoy gear will use a minimum of a single 4 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 when a fish or other animal is hooked.
7. Deep-set buoy gear must be deployed as quickly as practicable, and upon detection of a strike, must be retrieved as quickly as practicable.
8. The operator of the fishing vessel must actively tend all gear at all times, and must maintain the gear within sight (typically within 2nm of the gear) of the fishing vessel.

Other EFP terms and conditions that are likely not applicable to an authorized fishery : a) Fish caught with DSBG must be kept separate from fish caught with other gear, b) fish caught with DSBG may not be transferred from one vessel to another, and c) no more than 50 fishing days per year per vessel is permitted.

The Council may also want to address requirements for permits, logbooks, reporting and recovery of lost gear, and the labeling and numbering of gear to facilitate regulation compliance.

#### *Additional Measures for Protected Species Interactions*

The following protected species measures are part of the EFP terms and conditions may be considered for an authorized fishery:

1. All vessel operators shall undergo a safe handling and release workshop conducted by the NMFS West Coast Region (WCR) Protected Resources Division (PRD) prior to beginning fishing.
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 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 trip.

Another measure of the EFP terms and conditions also specifies that 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. This authorization would not occur before NMFS completes an ESA section 7 consultation on continued operation of the EFP. As part of the process of fully authorizing the DSBG fishery, NMFS would conduct an ESA section 7 consultation resulting in an incidental take statement providing a limit to the number of ESA-listed species which may be taken before reinitiating consultation.

#### *Observer Coverage*

The Council could recommend that DSBG vessels be required to carry an observer when notified by NMFS. 50 CFR 660.719 lays out general requirements for observers in HMS fisheries. It specifies that HMS vessels “may be required” to carry an observer and “must accommodate” an observer when required. Testing of electronic monitoring has not been conducted for this gear type, but may be an effective approach.

### *Logbooks*

Federal regulations at 50 CFR 660.708 establish a logbook requirement for HMS FMP fisheries. As part of authorizing the gear, the Council could make recommendations on what information should be reported in logbooks.

### *Area Closures*

As described above, under the EFPs use of the gear during the first year was not allowed north of the California-Oregon border. California Department of Fish and Wildlife has also expressed concern about authorizing the gear in state waters. The Council should determine whether any area (and/or time) restrictions should be imposed on the use of DSBG.

### **3. Considerations for a Limited Entry Permit Program**

The Council may consider limiting the number of participants in the fishery through a limited entry permit program. A limited entry permit system currently exists for drift gillnet but not harpoon swordfish fishery participants.

The HMS FMP describes permit requirements in section 6.2.5:

*This FMP requires a federal permit for HMS vessels with a specific endorsement for each gear type (harpoon, drift gillnet, surface hook and line, purse seine, and pelagic longline). The permit is to be issued to a vessel owner for each specific fishing vessel used in commercial HMS fishing. This action is a practical procedure for tracking and controlling, by permits, commercial HMS fishing activities and the effects of regulations on those activities.*

*Regulations implementing the FMP establish the permitting system and set the terms and conditions for issuing a permit. Initially, there will be no qualification criteria, such as minimum amount of landings, to obtain specific gear endorsements. Any commercial fisher may obtain the required gear endorsements. The permits and endorsements are subject to sanctions, including revocation, as provided by Section 308 (g) of the Magnuson-Stevens Act. Permit requirements could be changed in the future under the framework procedures (Section 5.1). This permit program would not eliminate existing state permit or licensing requirements, or federal permits under the High Seas Fishing Compliance Act.*

While the FMP allows permit requirements to be changed under framework procedures, a limited entry program is designated a fixed element of the Plan (see Sec. 2.4) requiring an FMP amendment to implement for DSBG. Additional limitations, such as the use of multiple gear types during a trip, may need to be evaluated and included in such an amendment.

Regulations at 50 CFR 660.707 lay out general permit requirements, the application and appeals process, and fees. Procedures governing sanctions are found at 15 CFR 904, subpart D.

Probably the most controversial aspect of establishing limited entry is determining the criteria for deciding who will qualify for a permit. The Council could specify a maximum number of permits to be issued or let that number be determined by the qualification criteria. A “phased” approach

could be considered where a certain number of permits are issued to start and additional permits are issued in the future. Factors that could be considered for permit qualification include:

1. Residency of vessel owner (keeping in mind National Standard 4)<sup>1</sup>
2. Swordfish and other HMS landings history of owner/vessel
3. State permit possession by owner/vessel for other HMS fisheries that target swordfish (i.e., DGN, harpoon)
4. State permit possession by owner/vessel for non-HMS fisheries (salmon, CPS, crab, etc.)
5. Federal HMS permit possession by owner/vessel
6. Compliance with existing fishery requirements (timeliness and completeness of logbooks, landing receipts, permitting, etc.)
7. Specified number of permits (set either initially or yearly) and issued on a “first come, first served” basis (either initially or yearly)

Alternatively, fishery participation could be regulated by the states. The above qualification criteria are likely to favor fishermen in Central and Southern California. But DSBG may be viable elsewhere in the Council management area. Having the states regulate participation could allow more localized regulation. However, this would only be applicable if gear is tested off of Washington and Oregon and gear is authorized in these areas.

#### *Workload Considerations*

The HMS Management Team (HMSMT) notes that similar regulatory issues will arise in considering whether to include H-gear or shallow-set longline with the suite of authorized gears under the Council’s Swordfish Management and Monitoring Plan. The Council could jointly consider DSBG, H-gear and shallow-set longline gear for authorization under the same decision process to avoid the increased workload which could result from considering them sequentially. However, combining authorization of all three gear types in a single process could lengthen the time needed to implement DSBG, due to the additional scrutiny required and the anticipated research and development time for H-gear.

Potential recommendations to the Council will be developed based on further discussion of DSBG amendment scoping at the March 2016 HMSMT meeting.

PFMC  
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<sup>1</sup> Conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (a) fair and equitable to all such fishermen; (b) reasonably calculated to promote conservation; and (c) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privilege.