NATIONAL MARINE FISHERIES SERVICE REPORT ON DEEP-SET BUOY GEAR AMENDMENT SCOPING

I. Introduction/DSBG Timeline

Deep-set buoy gear (DSBG) is a novel gear type that serves as an alternative method for selectively targeting swordfish, opah, and other marketable highly migratory species. The National Marine Fisheries Service (NMFS) Southeast Region authorized buoy gear as a distinct gear that could be used to target swordfish in the North Atlantic Ocean in 2006. Since 2010, research has been conducted in U.S. West Coast waters to determine the efficacy and efficiency of the gear and protected species interaction levels.

In 2010, the Pfleger Institute of Environmental Research (PIER) received a Saltonstall-Kennedy award to design and test the efficacy of DSBG in southern California. At that time, the NMFS Southwest Regional Office completed an environmental assessment, issuing a "Finding of No Significant Impact" regarding the environmental impacts of the gear. Gear development and experimental deployments began the following year, conducted under California Department of Fish & Wildlife Scientific Collection Permits and a National Oceanic & Atmospheric Administration (NOAA) letter of acknowledgement (LOA) with NOAA technical monitor coverage.

From 2011 to 2012, PIER conducted 54 four-hour sets consisting of 1,080 total hooks, and recorded zero protected species interactions. Catch for that time period included

- 14 swordfish
- 7 bigeye thresher sharks,
- 2 blue sharks,
- 2 opah,
- 1 common thresher shark, and
- 1 common mola[1].

PIER was awarded NOAA Bycatch Reduction Engineering Program (BREP) funding (NA12NMF4720255) in 2012 to test alternative DSBG designs during the 2013 season.

At the March 2013 Council meeting, PIER provided a briefing to the Highly Migratory Species (HMS) Management Team and HMS Advisory Subpanel on the results and future research direction of DSBG trials. Also at the March meeting, the Council recommended that NMFS continue to evaluate the efficacy and effectiveness of alternative gear types, including DSBG, for the harvesting of swordfish[2].

[1] Sepulveda, C.A., C. Heberer, and S.A. Aalbers. "Development and trial of deep-set buoy gear for swordfish, Xiphias gladius, in the Southern California Bight." *Marine Fisheries Review* 76.4 (2014): 28+. *Academic OneFile*. Web. 10 Feb. 2016.

[2] http://www.pcouncil.org/wp-content/uploads/0313decisions.pdf

PIER was again awarded NOAA BREP funding (NA13NMF720272) in 2013 to investigate alternative DSBG configurations that increase efficiency and minimize the potential for gear loss.

In March 2014, PIER presented its research findings to the Council, highlighting past results and the direction of future trials[3]. At the same meeting, the Council continued its exploration into utilizing a suite of environmentally and economically sustainable gear types, and expressed their intent to consider preliminary EFP applications[4]. In September, the Council posted a Solicitation Notice for EFPs for swordfish and other highly migratory species[5]. In 2015, the Council recommended three DSBG EFPs[6] for NMFS for consideration. In November of 2015, the Council expressed interest to "move forward rapidly to authorize DSBG"[7] under the HMS FMP.

II. Actions Associated with the Authorization of DSBG

Per the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the authorization of DSBG would require an amendment to the Fishery Management Plan for U.S. West Coast Fisheries for Highly Migratory Species (HMS FMP). This will require a National Environmental Policy Act (NEPA) analysis, possibly including an Environmental Impact Statement, and other associated analyses (e.g., Paperwork Reduction Act, Coastal Zone Management Act, Regulatory Flexibility Act, etc.).

Additionally, HMS regulations in the Code of Federal Regulations will need to be amended, and, if authorized, DSBG will need to be classified as a listed fishery under the Marine Mammal Protection Act (MMPA). Various analyses and processes would also need to be completed if DSBG were authorized. Associated actions are discussed below.

Section 6.1.1 of the HMS FMP states that, "new commercial or recreational gears may be authorized or existing legal gears may be prohibited using the framework adjustment procedures" as outlined in section 5.1. As DSBG is not a modification of an existing gear type, but rather a novel gear configuration, a "Full Rulemaking," consisting of at least two Council meetings and two *Federal Register* notices, is required. If DSBG is authorized, the Federal List of Fisheries under Council authority will need to be modified to be consistent with the definition of legal HMS gear in the FMP.

The MMPA List of Fisheries mandates that all U.S. commercial fisheries be placed into one of three categories, depending on its level of incidental mortality or serious injury to marine mammals. NMFS would designate the appropriate category for the DSBG fishery, and it is anticipated that DSBG would initially be considered a Category II fishery (occasional incidental mortality or serious injury of marine mammals) due to limited data. Recategorization occurs every year, but five years of data are needed to make this determination. Vessel operators must register for an exemption for the purpose of incidentally taking marine mammals in the course of

[3] http://www.pcouncil.org/wp-content/uploads/K5b_SUP_SWFSC_PPT2_MAR2014BB.pdf
[4] http://www.pcouncil.org/wp-content/uploads/0314decisions.pdf
[5] http://www.pcouncil.org/2014/09/32953/2nd-solicit-efp-swordfish-hms-2014/
[6] http://www.pcouncil.org/wp-content/uploads/2015/03/0315decisions.pdf
[7] http://www.pcouncil.org/wp-content/uploads/2015/11/1115decisions.pdf

commercial fishing operations and must maintain physical evidence of a current and valid exemption.

III. Council Considerations

The following information is meant to stimulate Council discussion regarding scoping the authorization of DSBG. Additionally, the Council may want to consider how a DSBG fishery interacts with, and addresses the goals of, the draft Swordfish Management and Monitoring Plan (SMMP).

Gear definition

Sec. 303(a)(2) of MSA states that the definition of a fishery must contain several descriptions, including, but not limited to, "the number of vessels involved, the type and quantity of fishing gear used, the species of fish involved and their location, the cost likely to be incurred in management, actual and potential revenues from the fishery, any recreational interest in the fishery, and the nature and extent of foreign fishing and Indian treaty fishing rights, if any."

When the FMP was originally developed, authorized gear types had already been in use; therefore the FMP incorporated into federal law existing practices that had been implemented previously by the states, rather than establishing a new fishery management regime. In defining legal DSBG, the Council may want to consider allowing for a range of options as it relates to specific characteristics of the gear (e.g., the number of hooks, lead weight, the type of line, buoy identifiers, etc.) so that innovations that increase efficiency and reduce bycatch are encouraged. The three DSBG EFPs issued by NMFS in 2015 provide a number of prescriptive measures regarding the characterization and management of DSBG (e.g., fishing with DSBG is limited to Federal waters, deployment is prohibited at night, a single set of gear may not contain more than a single weighted line with up to 3 hooks that may be soaked for up to 8 hours each day, etc.) and can be used as a general guideline for further discussion.

A key feature of DSBG is that it is actively tended, allowing fishermen to visualize strikes and minimize the time swordfish and other species are on the line. If active tending is to be included in the definition of DSBG, the Council may also wish to consider the specifics of this term (enforceability, distance-from-boat requirements, etc.).

Management Area

HMS FMP authorized gears are subject to various time and area restrictions along the U.S. West Coast. NMFS suggests that the Council consider whether similar restrictions be placed on a potential DSBG fishery. For instance, will the fishery be allowed in the Pacific Leatherback Conservation Area? Are there state restrictions that may prevent access to certain fishing grounds? Per Council recommendations for the DSBG EFPs, NMFS restricted fishing in the waters of Oregon and Washington - will similar restrictions apply to an authorized DSBG fishery? How will environmental events such as El Niño impact regulations and/or time and area restrictions?

Access

In November 2015, the Council expressed an interest in authorizing DSBG while considering the need for a permitting system. The anticipated number of entrants into the fishery and the

potential amount of effort and catch are key considerations in determining whether a limited entry program is warranted over an open access regime. According to PacFIN data, 160 unique vessels have landed swordfish on the west coast using authorized gear types since 2004. The same data show that 89 unique vessels have landed swordfish on the west coast from 2010 to 2015. The number of vessels by gear type during in this more recent period is as follows:

- Drift gillnet: 25
- Harpoon: 27
- Hawaii longline: 17
- Multiple gear types: 13
- Non-specified: 5
- West coast longline: 1
- Hook and line: 1

If it is decided that a limited entry program is necessary, MSA Sec. 303(b)(6) lists the requirements for limited access programs, and may offer guidance on future discussions regarding this option. Topics that may be of interest for Council discussion include whether or not limited entry is necessary; whether to establish a control date that would be publicized as a warning to new entrants that they might be excluded from the fishery in the future if entrance is limited; at what point limited entry would/would not be necessary; the specific goals of a limited entry program; how to promote the social and economic benefits to fishing communities; and enforcement, monitoring, and management of a limited entry program. Additionally, it will be necessary to determine the factors that permit access into the fishery, the number of permits allowed and when they are given access (i.e., a phased-in approach over a set amount of time or a fixed number of permits granted once the fishery is authorized), and whether or not a transition into an open access program should be considered given future reports and data on the fishery.

One option would be to establish a number of participants (perhaps expressed by the number of permits issued to DSBG vessels) which, if and when reached, would automatically trigger a moratorium on additional entry and/or further council consideration of the need for limiting entry.

Catch Limits & Reporting

DSBG is an artisanal gear type intended to supplement existing catch within the swordfish fishery, as it catches a smaller amount of swordfish compared to drift gillnet and longline gears. In their most recent stock assessment for North Pacific swordfish, the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean determined that the Western and Central North Pacific Ocean stock is not overfished or experiencing overfishing. The Eastern Pacific Ocean (EPO) stock is not overfished, but there is a greater than 50 percent probability that the stock is experiencing overfishing[8]. However, as referenced in a letter transmitted to the Council on July 14, 2015, U.S. EPO swordfish catch in 2012 was 4 metric tons, specifically by Hawaii longline vessels.

[8] https://www.wcpfc.int/system/files/SC10-SA-WP-13%20North%20Pacific%20Swordfish%20Assmt%20Report%202014.pdf

Logbook requirements are explicitly stated at 50 CFR 660.708 for commercial vessels fishing for highly migratory species in the management area. However, specific state reporting requirements are also in effect. The Council may wish to discuss whether individual state logbook reporting requirements are necessary, as well as the information that logbooks should contain.

Observer Requirements
The Council might consider the requirements for observer coverage, and whether DSBG vessels would be required to carry observers when notified by NMFS. HMS FMP regulations at 50 CFR 660.719(a) state that, "all fishing vessels with permits issued under this subpart and operating in HMS fisheries, including catcher/processors, at-sea processors, and vessels that embark from a port in Washington, Oregon, or California and land catch in another area, may be required to accommodate an NMFS certified observer on board to collect scientific data."

Under this scenario, NMFS may institute a pilot observer program to assess the type and extent of bycatch in the DSBG fishery, similar to previous pilot programs conducted in the albacore troll/baitboat, coastal tuna purse seine, and commercial passenger fishing vessel fisheries. Data from such a pilot program could be used to assess whether it is necessary to continue observing the DSBG fishery, and at what level of observer coverage.

Alternatively, the Council could recommend that all DSBG vessels are required to maintain a certain minimum level of observer coverage. Vessel owners would be responsible for meeting this requirement and paying for observer coverage. This cost would reduce DSBG profitability, and, if prohibitive, create a barrier to entry into the fishery.

Purpose & Need
The considerations discussed above may help the Council define both the purpose and the need for this potential action. Identifying a clear purpose and need will also help in the development of the Range of Alternatives and the NEPA analysis. The Council may want to consider how the purpose and need meets the goals of its draft SMMP identified below:

- Reduce protected species bycatch in the swordfish fishery through mitigation, gear innovation, and individual accountability,
- Reduce unmarketable finfish catch in the swordfish fishery through mitigation, gear innovation, and individual accountability,
- Support the economic viability of the swordfish fishery so that it can meet demand for a fresh, high quality, locally-caught product.

IV. Future Workload Planning

The "Pacific Council Workload Planning: Preliminary Year-at-a-Glance Summary"[9] document lists multiple HMS agenda items to be discussed at future Council meetings in 2016. However, the total estimated floor time for those items exceeds the amount of time reserved for HMS matters. The Council may wish to prioritize HMS agenda items on the "Year-at-a-Glance Summary" to reflect its priorities.

If the Council decides to continue moving forward with the authorization of the DSBG fishery, NMFS respectfully suggests the following schedule for Council discussion due to limited

[9] http://www.pcouncil.org/wp-content/uploads/2015/11/PostNov15_YAG_.pdf

staffing and workload constraints. NEPA analysis, regulatory amendment processes, and other tasks will take place concurrently.

- March 2016 – Scoping
- June 2016 – Range of Alternatives
- November 2016 – Preliminary Preferred Alternative
- March 2017 – Final Preferred Alternative