RANGE OF ALTERNATIVES FOR PROTECTED SPECIES HARD CAPS, FINFISH BYCATCH REDUCTION, AND ENHANCED MONITORING IN THE CALIFORNIA LARGE MESH DRIFT GILLNET FISHERY ADOPTED AT THE SEPTEMBER 2014 COUNCIL MEETING

In September 2014 the Council adopted three sets of alternatives for management of the California large mesh drift gillnet (DGN) fishery: 1) protected species hard caps (take caps), 2) finfish bycatch reduction, and 3) DGN fishery monitoring. The Council selected preliminary preferred alternatives (PPAs) for hard caps and fishery monitoring. This document describes these alternatives based on the amended motion passed under Agenda Item G.4, September 2014. The original motion and amendments, as displayed at the time of adoption are included for reference.

1 Protected Species Hard Cap Alternatives

1.1 General Features of the Alternatives

- Caps are based on mortality/serious injury (M/SI) assessment
- Application of hard caps would be aligned with the fishing season (May 1-January 31)[1]
- The fishery closes immediately when estimated M/SI equals the cap for any capped species
- Two sub-options are included under each action alternative (except the Council's PPA): 1) Fishing season hard caps assessed based on total estimated M/SI from August 15 each year; 2) Annual hard caps expanded to a calculated 5-year total, assessed based on estimated M/SI in previous 5 years from the date of the observed take (i.e., an M/SI event that occurred on November 25, 2016 would be assessed against total estimated M/SI since November 25, 2011)

1.2 Description of the Alternatives

No Action Alternative: Status quo with continued management of protected species bycatch through established MMPA and ESA Federal processes.

Alternative 1: Hard caps for high priority protected species based on the Incidental Take Statement (ITS) in the May 2, 2013, Biological Opinion (BO) for the California DGN fishery.

> Species: fin, humpback and sperm whales; leatherback, loggerhead, olive ridley and green sea turtles.

Alternative 2: Hard caps for selected marine mammals based on not exceeding potential biological removal (PBR) levels reported in the annual U.S. Pacific Marine Mammal Stock Assessment Report; hard caps for ESA-listed sea turtles are based on the ITS from the California DGN fishery 2013 BO.

> Species: sperm, humpback, and short-fin pilot whales; leatherback and loggerhead sea turtles

Alternative 3: Hard caps for marine mammals with documented recent (2001-2013) encounters with the DGN fishery with overall hard caps for grouped dolphins and pinnipeds; hard caps for ESA listed sea turtles

[1] The fishery is closed February 1-April 30 and prohibited from operating within 75 nmi of the mainland shore from May 1 to August 15. Between August 15 and January 31 additional closures are in place including the Pacific Leatherback Conservation Area.

based on the ITS in the 2013 DGN fishery BO. (Marine mammal hard caps are based on PBR as in Alternative 2, although this is not stated in HMSMT Report 3).

> Species: sperm, humpback, and short-fin pilot whales; leatherback and loggerhead sea turtles plus groups for pinnipeds and dolphins

Alternative 4: Hard caps for ESA-listed marine mammals and sea turtles based on levels for which takes are unlikely to trigger a jeopardy determination.

> Species: sperm and humpback whales; leatherback and loggerhead turtles

Alternative 5 (Preliminary Preferred Alternative): Hard caps for high priority protected species based on the ITS in the 2013 DGN fishery BO with increases for selected species. **This alternative only includes the 1-year cap sub-option.** The PPA also includes performance objectives for other selected protected species, which are not hard caps.

> Species: fin, humpback and sperm whales; leatherback, loggerhead, olive ridley and green sea turtles, short-finned pilot whale

1.3 Calculation of Take Caps

Table 1 shows the annual hard cap values for the action alternatives except for Alternative 4. Alternative 4 proposes caps that use ITS take estimates as a threshold with caps established above these levels. A method for determining these caps has not been identified. Table 2 shows the 5-year hard cap values. 5-year values were taken from the ITS where applicable (Table 4 reproduces the table in the DGN Biological Opinion showing estimated total–not observed–incidental take; this was reproduced as Table 1 in HMSMT Report 3). Annual PBR values were multiplied by five. For cap numbers in the PPA, where numbers from Table 1 in HMSMT Report 3 are expanded (blue shaded cells) the expansion used for the 1-year caps was applied to the 5-year caps, e.g., annual cap for fin whale is based on doubling the ITS number so the ITS 5-year take is based on doubling the ITS value of 2. Table 3 shows the constituent species for the dolphin and pinniped groups identified under Alternative 3.

Table 1. One-year hard cap numbers. See notes.

	1-Year Caps			
Species	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 5 (PPA)**
Fin whale	1			2
Humpback whale	2	11	11	2
Sperm whale	2	1.5	1.5	2
Leatherback turtle	3	3	3	3
Loggerhead turtle	3	3	3	3
Olive ridley turtle	1			2
Green turtle	1			2
Short-finned pilot whale		4.6	4.6	4.6*
Dolphin group			4,316	
Pinniped group			13,582	

*Added by an amendment to the main motion but no specific cap number identified. PBR is used.
Notes:
Alternative 4 not included, because cap levels not identified
Yellow cells: based on PBR

Blue cells: Hard caps set above ITS number

Table 2. Five-year cap values from ITS or PBR expansion. (While the sub-option for a 5-year rolling cap option was not included under the PPA, the numbers are shown in this table for analytical purposes.)

	Rolling 5-year caps			
Species	**Alt 1**	**Alt 2**	**Alt 3**	**Alt 5 (PPA)**
Fin whale	2			(4)
Humpback whale	4	55	55	(4)
Sperm whale	8	7.5	7.5	(8)
Leatherback turtle	10	10	10	(10)
Loggerhead turtle	7	7	7	(7)
Olive ridley turtle	2			(4)
Green turtle	2			(4)
Short-finned pilot whale		23	23	(23)
Dolphin group*			21,580	
Pinniped group*			67,910	

*See Table 3 for marine mammals included in the dolphin and pinneped groups.
Notes:
Alternative 4 not included, because cap levels not identified
Yellow cells: based on PBR
Blue cells: Hard caps set above ITS number

Table 3. Components of the dolphin and pinniped groups under Alternative 3

Dolphin group	**4,316**
Short-Beaked Common Dolphin	3,440
Long-Beaked Common Dolphin	610
Pacific White-sided Dolphin	171
Northern Right Whale Dolphin	48
Risso's Dolphin	39
Bottlenose Dolphin	7.9
Pinniped group	**13,582**
California sea lion	9,200
Northern elephant seal	4,382

Table 4. Table 12 from the May 2, 2013, DGN Biological Opinion: Amount and extent of take on individuals expected in the DGN fishery. (Footnotes added by HMSMT.)

Species	Annual take	5-year take total	Expected mortalities** during 5-year period
Fin whale*	up to 1	up to 2	up to 1
Humpback whale	up to 2	up to 4	up to 2
Sperm whale	up to 2	up to 8	up to 6
Leatherback turtle	up to 3	up to 10	up to 7
Loggerhead turtle	up to 3	up to 7	up to 4
Olive ridley turtle*	up to 1	up to 2	up to 1
Green turtle*	up to 1	up to 2	up to 1

*No takes observed since 2001.
**Includes animals that may be determined to have experienced either serious injury or mortality as a result of interaction with the fishing gear.
†Hard cap values rounded to the nearest whole animal. Values less than <0.5 are rounded to 1 for practical purposes.

2 Performance Objectives / Bycatch Reduction Targets

Performance objectives are not hard caps. The Council would periodically review fishery performance in relation to the objectives and determine what, if any, additional management measures are needed.

2.1 Non-ESA Listed Marine Mammals

In addition to hard caps, the PPA includes performance objectives for other marine mammals. The performance objective is defined as observed SI/M in 2015 with the intent that these objectives would be lowered in future years (noting that objectives cannot be less than zero). These objectives are based on the 10-year maximum observed interactions (in any one season) over the 10 fishing seasons, 2004-05 through 2013-14.

Table 5. Performance objectives for non-ESA listed marine mammals.

Species	Annual performance objective
Short-finned pilot	2
Minke	0
Grey	1
Short Beaked Common Dolphin	9
Long Beaked Common Dolphin	5
Pacific White-sided Common Dolphin	3
Northern Right Whale Dolphin	3
Risso's Dolphin	1
Bottlenose Dolphin	1
California sea lion	18
Northern Elephant seal	1

2.2 Finfish Bycatch

Bycatch is defined in the MSA as "fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards." In discussing bycatch it is important to distinguish between the common use of the term bycatch to mean fish which are not targeted in a fishery but may be retained and sold or kept, and the MSA definition, which, in practical terms, applies to fish that are discarded (usually at sea at the time of harvest).

The Council intends to establish performance objectives for finfish bycatch at the level to be selected from the range of alternatives identified in Agenda Item G.4.b, HMSMT Report 3, September 2014, and additional public comment from this agenda item.

HMSMT Alternatives

No Action: Do not establish finfish bycatch reduction measures.

Alternative 1: Bycatch reduction target established as landed catch divided by total catch (retained catch plus alive/dead/unknown discards).

Alternative 2: Bycatch reduction target established landed catch divided by total catch mortality (retained catch plus dead/unknown discards).

Alternative 3: Modify Alternatives 1 and 2 to apply to a subset of bycatch species and/or set targets for groups of species (e.g., common mola, sharks, striped marlin).

The Council would annually review (in March or April) fishery performance and recommend bycatch reduction management measures as needed. Management measures could be triggered by annual evaluation of rolling tallies over longer time-spans (e.g., reaching thresholds in any 2 years of a 5 year span could trigger action).

The HMSMT does not favor establishing bycatch targets as quotas, which would be functionally equivalent to a hard cap (i.e., a fishery closes when a quota is attained). Instead, the Council could track bycatch and impose incentives or penalties to reduce bycatch over time. Ideally, management could incorporate individual accountability.

Public Comment

See Agenda Item G.4.c, Public Comment and Supplemental Public Comment packages 1-9, September 2014.

3 Observer Coverage

The Council adopted the range of alternatives in Agenda Item G.4.b, HMSMT Report 3, September 2014, which are listed below as alternatives 1-4. The motion as amended added three additional alternatives and identified a PPA (listed as Alternative 7 below).

- **No Action**: Maintain the current 30% target observer coverage level.
- **Alternative 1**: Maintain the 30% target observer coverage level but remove the unobservable vessel exemption.
- **Alternative 2**: Maintain the 30% target observer coverage level and deploy electronic monitoring (EM) on unobservable vessels.
- **Alternative 3**: Maintain the 30% target observer coverage level and require EM on all vessels that fish.
- **Alternative 4**: Target observer coverage to a level sufficient for biological sampling and require EM on all vessels that fish.
- **Alternative 5**: Maintain a minimum of 33% observer coverage level, remove the unobservable vessel exemption, and allow individual vessels the flexibility to contract with an approved observer provider company
- **Alternative 6**: Maintain a minimum of 50% observer coverage level, remove the unobservable vessel exemption, and allow individual vessels the flexibility to contract with an approved observer provider company
- **Alternative 7 (PPA):** Maintain the 30% target observer coverage level and/or require EM (for the purpose of catch and bycatch accounting) but remove the unobservable vessel exemption. Achieve 100% monitoring by 2018.

4 Original Text of Motions as Adopted by the Council

Main Motion (Wolford/Yaremko)

For the Drift Gillnet Fishery: Move the range of alternatives in the Management Team Report 3 (G4b_HMSMT_Rpt3_DGN_SEPT2014BB) go out for public review; but to narrow the range of the alternatives and to focus the public's attention and to focus the analysis I would identify the following as our **Preliminary Preferred Alternative:**

Regarding Hard Caps, adopt:

Mammals:

Table 1, page 4, (HMSMT Report 3) for the species listed, using the numbers in the first column – Annual Take with the following changes:

- Column title is "Annual Mortality/Serious Injury" (not Take)
- For Fin Whale – up to 2
- For Olive Ridley – up to 2
- For Green – up to 2

Regarding other mammals not covered in Table 1, adopt for public review Table 4, pg 7 (HMSMT Report 3) as performance objectives, not hard caps, – but rather as annual catch targets that should not be exceeded – using the 10 yr maximum column for Observed Mortality numbers for 2015 with the intent to achieve lower numbers in future years. This would then include the following species and annual performance objectives for 2015:

Short-finned pilot	2
Minke	0
Grey	1
Short Beaked Common Dolphin	9
Long Beaked Common Dolphin	5
Pacific White-sided Common Dolphin	3
Northern Right Whale Dolphin	3
Risso's Dolphin	1
Bottlenose Dolphin	1
California sea lion	18
Northern Elephant seal	1

Note this excludes the "unidentified" common dolphin

Finfish:

Alternative 3, on page 8 (HMSMT Report 3) as performance objectives, not hard caps, – but rather as annual catch targets that should not be exceeded as discard mortality for specific fish (from Management Team Rpt 5 (G4b_HMSMT_Rpt5_SEPT2014BB) pg 1 using the annual average dead removals)

- Blue sharks – 143
- Mola – 68
- Marlins – 28 (from Public Comment, not from HMSMT Report 5)

For both non-ESA listed Mammals and Finfish, include a one year only rollover option: number 4 on page 3 as described in Management Team Rpt 5 (G4b_HMSMT_Rpt5_SEPT2014BB).

Regarding Observability:

Adopt from HMSMT Report 3 a blend of alternatives found on pages 9 and 10 as follows:

Essentially Alt 3 but explicitly removing the unobservable exemption: by the 2018 fishing season: 100% Monitored – at the current level of human observers, with EM (for the purpose of catch and by-catch accounting) on all other vessels, removing the unobservable exemption.

Amendment (Culver/Lincoln)

Insert at the preamble of the motion: "The range of methods and the corresponding basis for the potential hard caps described in HMSMT Report 3 would remain".

Add to the hard cap PPA section:

a. Application of hard caps would be aligned with the fishing season (August 15-January 31) – PPA
b. Hard caps would apply to fishery mortality and/or serious injury (M/SI) – PPA
c. At a minimum, annual hard caps, ~~multiple year hard caps, and hard caps with roll over features~~* would be in place for high priority protected species (i.e., ESA-listed and those with an annual M/SI of greater than or equal to 10% PBR). Species: fin, humpback, short-finned pilot, and sperm whales; leatherback, loggerhead, olive ridley, and green sea turtles – PPA

d. Hard caps may also be considered for the other species listed in Table 4 in HMSMT Report 3, p. 7.

~~In the finfish section, replace the PPA w/ "Status quo – no action for finfish bycatch reduction measures – PPA"~~ (Replaced by Yaremko/Culver amendment to the amendment, see below)

In Fishery monitoring section, add: For fishery monitoring, analyze the following alternatives:

i. Maintain a minimum of 33% observer coverage level, remove the unobservable vessel exemption, and allow individual vessels the flexibility to contract with an approved observer provider company
ii. Maintain a minimum of 50% observer coverage level, remove the unobservable vessel exemption, and allow individual vessels the flexibility to contract with an approved observer provider company

Also add: "Provide guidance to the HMSMT to include the following in their analysis:

Using NMFS observer data for the last five seasons (2009-2010 through 2013-2014), and a monthly timeline on the X axis, expand the data to estimate when takes of the high priority protected species listed above would have occurred with the corresponding targeted species (swordfish) catch and bycatch of common mola, sharks, and striped marlin (Note: These species would be listed on the Y axis).

*** Helvey/Sones amendment to the Culver/Lincoln amendment; failed.**

Amendment to the Culver/Lincoln amendment (Yaremko/Culver):

Identify the PPA regarding finfish bycatch establish performance objectives for finfish bycatch at the level to be selected from the range of alternatives identified by the HMSMT and additional public comment from this agenda item.

Amendment to the amendment carried unanimously.

Culver amendment as amended carried.
Main motion as amended carried.