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**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**RIN 0648-XC645**

**Taking of Threatened or Endangered Marine Mammals Incidental to Commercial Fishing Operations;  
Issuance of Permit**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Notice.

**SUMMARY:** NMFS hereby issues an amended permit to authorize the incidental, but not intentional, take of two stocks of marine mammals listed as threatened or endangered under the Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), by the California (CA) thresher shark/swordfish drift gillnet fishery ( $\geq 14$  in mesh) and the Washington (WA)/Oregon (OR)/CA sablefish pot fishery. In accordance with the MMPA, NMFS has made a determination that incidental taking from commercial fishing will have a negligible impact on the endangered humpback whale, CA/OR/WA stock and endangered sperm whale, CA/OR/WA stock. This authorization is based on a determination that this incidental take will have a negligible impact on the affected marine mammal stocks, recovery plans have been developed for each species, a monitoring program is established, vessels in the fisheries are registered, and that the necessary take reduction planning is in place for the humpback and sperm whale stocks. This amended permit replaces the permit issued on September 4, 2013.

**DATES:** This amended permit is effective on [*INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER*] and expires on September 4, 2016.

**ADDRESSES:** Reference material for this permit is available on the Internet at:

[http://www.westcoast.fisheries.noaa.gov/protected\\_species/marine\\_mammals/marine\\_mammals\\_html](http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/marine_mammals_html). Recovery plans for these species are available on the Internet at: <http://www.nmfs.noaa.gov/pr/recovery/plans.htm#mammals>.

Information on the Pacific Offshore Cetacean Take Reduction Plan is available on the internet at:

<http://www.nmfs.noaa.gov/pr/interactions/trt/poctrp.htm>.

Copies of the reference materials may also be obtained from the Protected Resources Division, 501 W. Ocean Blvd., Suite 4200, Long Beach, CA 90802.

**FOR FURTHER INFORMATION CONTACT:** Monica DeAngelis, NMFS West Coast Region, (562) 980–3232, or Shannon Bettridge, NMFS Office of Protected Resources, (301) 427–8402.

**SUPPLEMENTARY INFORMATION:**

**Background**

Section 101(a)(5)(E) of the Marine Mammal Protection Act (MMPA), 16 U.S.C. 1361 *et seq.*, states that NOAA’s National Marine Fisheries Service (NMFS), as delegated by the Secretary of Commerce, shall for a period of up to three years allow the incidental taking of marine mammal species listed under the Endangered Species Act (ESA), 16 U.S.C. 1531 *et seq.*, by persons using vessels of the United States and those vessels which have valid fishing permits issued by the Secretary in accordance with section 204(b) of the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. 1824(b), while engaging in commercial fishing operations, if NMFS makes certain determinations. NMFS must determine, after notice and opportunity for public comment, that: (1) incidental mortality and serious injury will have a negligible impact on the affected species or stock; (2) a recovery plan has been developed or is being developed for such species or stock under the ESA; and (3) where required under section 118 of the MMPA, a monitoring program has been established, vessels engaged in such fisheries are registered in accordance with section 118 of the MMPA, and a take reduction plan has been developed or is being developed for such species or stock.

On August 25, 2014 (79 FR 50626), NMFS proposed to issue an amended permit under MMPA section 101(a)(5)(E) to vessels registered in the CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  in mesh) to incidentally take individuals from two stocks of threatened or endangered marine mammals: The CA/OR/WA stock of humpback whales (*Megaptera novaeangliae*) and the CA/OR/WA stock of sperm whales (*Physeter macrocephalus*); and to vessels registered in WA/OR/CA sablefish pot fishery to incidentally take individuals from the CA/OR/WA stock of humpback whales. A history of MMPA section 101(a)(5)(E) permits related to these stocks was included in previous notices for other permits to take threatened or endangered marine mammals incidental to commercial fishing (*e.g.*, 72 FR 60814, October 26, 2007; 78 FR 54553, September 4, 2013) and is not repeated here. The data for considering these authorizations were reviewed coincident with the 2014 MMPA List of Fisheries

(LOF; 79 FR 14418, March 14, 2014), final 2013 U.S. Pacific Marine Mammal Stock Assessment Reports (SAR; Carretta *et al.* 2014a), the draft 2014 U.S. Marine Mammal SAR (Carretta *et al.* 2014b), Carretta and Moore (2014), Moore and Barlow (2014), the Fishery Management Plan (FMP) for U.S. West Coast Fisheries for Highly Migratory Species (HMS), recovery plans for these species (available on the Internet at: <http://www.nmfs.noaa.gov/pr/recovery/plans.htm#mammals>), the best scientific information and available data, and other relevant sources.

The previous permit was issued on September 4, 2013 (78 FR 54553), valid for a period of up to 3 years and expiring on September 4, 2016, and covered the CA/OR/WA stocks of humpback, fin, and sperm whale. Since issuing that permit, there have been significant changes in the information and conditions used to make the negligible impact determination for that permit. This MMPA 101(a)(5)(E) permit amends the previously issued permit, updates the information on the known biological and ecological data on sperm and humpback whales, and updates information on human-caused mortality and serious injury (M/SI), since the September 2013 permit (78 FR 54553). This 101(a)(5)(E) permit does not extend the expiration date and remains effective until September 4, 2016. The final amended negligible impact determination does not include the CA/OR/WA fin whale stock because there has been no observed take of a fin whale in the CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  in mesh) for the past 15 years. Therefore, the new amended permit will only cover the CA/OR/WA stocks of humpback and sperm whales and will no longer cover the CA/OR/WA fin whale stock.

Based on observer data and marine mammal reporting forms, the vessels operating in the Category I CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  in mesh) and the Category II WA/OR/CA sablefish pot fishery are the only Federal Category I and II fisheries that operate in the ranges of affected stocks, namely the CA/OR/WA stocks of humpback whale and sperm whale, are currently authorized. A detailed description of these fisheries can be found in the negligible impact determination (see **ADDRESSES**). The CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  in mesh) is the only Category I fishery operating off the coasts of California, Oregon, and Washington. All other Category II fisheries that may interact with the marine mammal stocks observed off the coasts of California, Oregon, and Washington are state managed and are not considered for authorization under this permit. NMFS calculated the total known, assumed, or extrapolated human-caused M/SI to make a final negligible impact determination for this authorization and included all human sources. Participants in Category III fisheries are not

required to obtain incidental take permits under MMPA section 101(a)(5)(E) but are required to report any mortality or injury of marine mammals incidental to their operations (Section 118 of the MMPA 16 U.S.C. 1387 and 50 CFR part 229).

### **Basis for Determining Negligible Impact**

Prior to issuing a permit to take ESA-listed marine mammals incidental to commercial fishing, NMFS must determine if M/SI incidental to commercial fisheries will have a negligible impact on the affected species or stocks of marine mammals. NMFS satisfied this requirement through completion of a negligible impact determination (see **ADDRESSES**). NMFS clarifies that incidental M/SI from commercial fisheries includes M/SI from entanglement in fishing gear or ingestion of fishing gear. NMFS calculated the total human-caused M/SI to make a negligible impact determination for this authorization and included all human sources, such as commercial fisheries and ship strikes. Indirect effects, such as the effects of removing prey from habitat, are not included in this analysis. A biological opinion prepared under ESA section 7 considers direct and indirect effects of Federal actions (available at <http://www.westcoast.fisheries.noaa.gov/>) and thus contains a broader scope of analysis than is required by MMPA section 101(a)(5)(E).

Although the MMPA does not define “negligible impact,” NMFS has issued regulations providing a qualitative definition of “negligible impact” in 50 CFR 216.103 as: “an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to adversely affect the species or stock through effects on annual rates of recruitment or survival.” Through scientific analysis, peer review, and public notice, NMFS has developed a quantitative approach to making a negligible impact determination for MMPA section 101(A)(5)(E) permits, and is followed here. The development of the approach is outlined in previous notices for other permits to take threatened or endangered marine mammals incidental to commercial fishing (*e.g.*, 72 FR 60814, October 26, 2007; 78 FR 54553, September 4, 2013).

### **Criteria for Determining Negligible Impact**

In 1999, NMFS proposed criteria to determine whether M/SI incidental to commercial fisheries will have a negligible impact on a listed marine mammal stock for MMPA 101(a)(5)(E) permits (64 FR 28800, May 27, 1999). In applying the 1999 criteria, Criterion 1 is whether total known, assumed, or extrapolated human-caused M/SI is less than 10 percent of the potential biological removal level (PBR) for the stock. If total known, assumed, or

extrapolated human-caused M/SI is less than 10 percent of PBR, the analysis would be concluded, and the impact would be determined to be negligible. If Criterion 1 is not satisfied, NMFS may use one of the other criteria as appropriate. Criterion 2 is satisfied if the total known, assumed, or extrapolated human-caused M/SI is greater than PBR, but fisheries-related M/SI is less than 10 percent of PBR. If Criterion 2 is satisfied, vessels operating in individual fisheries may be permitted if management measures are being taken to address non-fisheries-related mortality and serious injury. Criterion 3 is satisfied if total fisheries-related M/SI is greater than 10 percent of PBR and less than PBR, and the population is stable or increasing. Fisheries may then be permitted subject to individual review and certainty of data. Criterion 4 stipulates that if the population abundance of a stock is declining, the threshold level of 10 percent of PBR will continue to be used. Criterion 5 states that if total fisheries-related M/SI are greater than PBR, permits may not be issued for that species or stock.

We considered two time frames for this analysis: 5 years (2009–2013) and 13 years (2001–2013). The first time frame we considered for both stocks of whales was the most recent 5-year period (here, January 1, 2009 through December 31, 2013), which is typically used for negligible impact determination analyses. A 5-year time frame in many cases provides enough data to adequately capture year-to-year variations in take levels, while reflecting current environmental and fishing conditions as they may change over time. For humpback whales, we used a 5-year period consistent with the general recommendations in NMFS' Guidelines for Assessing Marine Mammal Stocks (GAMMS) for our final determination. However, GAMMS suggests that mortality estimates could be averaged over as many years as necessary to achieve a coefficient of variation of less than or equal to 0.3. Carretta and Moore (2014) determined that approximately 25 years of pooling data is necessary before bycatch CVs approached the value of 0.3, considered adequate for management (NMFS 2005) and recommend pooling longer time series of data when bycatch is a rare event. In their analysis, pooling 10 years of fishery data resulted in bycatch estimates within 25 percent of the true bycatch rate over 50 percent of the time (*i.e.*, estimates were within 25 percent of the true value more often than not). Key to this approach was that the fishery must have had sufficiently constant characteristics (*e.g.*, effort, gear, locations) to support the inference of consistent results across years such as with the CA thresher shark/swordfish drift gillnet fishery. Rare bycatch events typically involve smaller populations paired with low observer coverage in a fishery. If true bycatch mortality is low, but near PBR, then

estimation bias needs to be reduced to allow reliable evaluation of the bycatch estimate against a low removal threshold.

Currently, the sperm whale is the only ESA-listed marine mammal species interacting with the thresher shark/swordfish drift gillnet fishery ( $\geq 14$  in mesh) meeting the conditions described in Carretta and Moore (2014): The stock has a relatively small minimum population estimate ( $N_{min}$ ), and two members of the stock was recently recorded as having been incidentally killed or seriously injured in a rare event (in the CA thresher shark/ swordfish drift gillnet fishery ( $\geq 14$  in mesh)). The post-2000 time period best represents the current spatial state of the fishery; and, therefore, we used the 13-year period post-2000 to calculate mean annual mortality estimate for this stock of sperm whales, based on recommendations contained in the GAMMS and Carretta and Moore (2014).

Moore and Barlow (2014) used a Bayesian hierarchical trend model for the CA/OR/WA sperm whale stock to more efficiently incorporate all available survey information to calculate the population abundance estimate using a longer time series to improve the precision of abundance estimates. The new analysis by Moore and Barlow (2014), estimates the minimum abundance at 1,332 sperm whales using the Bayesian hierarchical trend modeling of sighting data from 2001–2012. We use this estimate as the basis of this analysis. The associated PBR for the CA/OR/WA stock of sperm whales is 2.7 (Draft 2014 Pacific Marine Mammal Stock Assessment Reports, 80 FR 4881, January 29, 2015).

### **Negligible Impact Determinations**

As explained above, the permit amendment relies on a negligible impact determination that uses a new 13-year period for averaging sperm whale bycatch rates rather than the 5-year period generally recommended in the GAMMS because it best represents the spatial state of the fishery and more effectively incorporates all available survey information to calculate the population abundance estimate using the longer time series. We used a 5-year period for humpback whales consistent with the general recommendations in NMFS' GAMMS for our final determination (note that a 13-year time period (2001–2013) also resulted in a finding of negligible impact for humpback whales). The PBR for the CA/OR/WA humpback whale stock is 11 animals.

The final amended negligible impact determination made available through this notice provides a complete analysis of the criteria for determining whether commercial fisheries off California, Oregon, and Washington are having a

negligible impact on the CA/OR/WA stocks of humpback whale and sperm whale. A summary of the analysis and subsequent determination follows.

#### *Criterion 1 Analysis*

Criterion 1 would be satisfied if the total known, assumed, or extrapolated human-caused M/SI is less than 10 percent of PBR. The 5-year (2009–2013) average annual human-caused M/SI to the CA/OR/WA stock of humpback whales is 5.0 or 45.45 percent of the PBR. The 13-year (2001–2013) average annual M/SI to the CA/OR/WA stock of sperm whales from all human sources is 1.7 or 65.5 percent of the PBR. Criterion 1 was not satisfied for either stock because the total known, assumed, or extrapolated human-caused M/SI for these stocks is not less than 10 percent of PBR for the respective time period considered. As a result, the other criteria must be examined for the CA/OR/WA stocks of humpback and sperm whales.

#### *Criterion 2 Analysis*

Criterion 2 is satisfied if total known, assumed, or extrapolated human-caused M/SI are greater than PBR and the total fisheries related mortality is less than 10 percent of PBR. Criterion 2 was not satisfied for the CA/OR/WA stocks of humpback whales or sperm whales for each time frame considered, based on the calculations described under Criterion 1. As a result, the other criteria were examined.

#### *Criterion 3 Analysis*

Unlike Criteria 1 and 2, which examine total known, assumed, or extrapolated human-caused M/SI relative to PBR, Criterion 3 compares total fisheries-related M/SI to PBR. Criterion 3 would be satisfied if the total commercial fisheries-related M/SI (including state and federal fisheries) is greater than 10 percent and less than 100 percent of PBR for each stock for the respective time frame considered, and the populations of these stocks are considered to be stable or increasing. If the criterion is met, vessels may be permitted subject to individual review and certainty of data.

Criterion 3 was satisfied for the CA/OR/WA humpback whale stock as the fishery-related M/SI from all commercial fisheries for the CA/OR/WA humpback whale stock is estimated at 40 percent of PBR (5-year average from 2009–2013 and between 10 percent and 100 percent of PBR), the stock has experienced a positive growth rate (8 percent per year), and there have been few known or assumed M/SI due to the subject fisheries.

Criterion 3 was satisfied for the CA/OR/WA sperm whale stock as the total fishery-related M/SI is greater than 10 percent of and less than 100 percent of PBR, and the population is considered stable. The fishery-related M/SI from all commercial fisheries for the CA/OR/WA sperm whale stock is estimated at 57 percent of PBR for the 13-year period of 2001–2013.

In conclusion, based on the criteria outlined in 1999 (64 FR 28800), the final 2013 U.S. Pacific Marine Mammal SAR (Carretta *et al.* 2014), the draft 2014 U.S. Pacific Marine Mammal SAR (Carretta *et al.* 2014), Carretta and Moore (2014), Moore and Barlow (2014), and the best available scientific information, available data and other sources, NMFS has determined that the M/SI incidental to the CA thresher shark/swordfish drift gillnet fishery and the WA/OR/CA sablefish pot fishery will have a negligible impact on the CA/OR/WA stock of humpback whales and the CA thresher shark/swordfish drift gillnet fishery will have a negligible impact on the CA/OR/WA stock of sperm whales.

#### **Determinations**

Based on the above assessment and as described in the accompanying final negligible impact determination, NMFS concludes that the incidental M/SI from the CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  in mesh) and WA/OR/CA sablefish pot fishery will have a negligible impact on the CA/OR/WA stock of humpback whales and the CA/OR/WA stock of sperm whales, and the WA/OR/CA sablefish pot fishery will have a negligible impact on the CA/OR/WA stock of humpback whales. Since there have been no documented interactions between the CA/OR/WA stock of sperm whale and the WA/OR/CA sablefish pot fishery, that sperm whale stock is not evaluated for that fishery.

The National Environmental Policy Act (NEPA) requires Federal agencies to evaluate the impacts of alternatives for their actions on the human environment. The impacts on the human environment of continuing and modifying the CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  inch mesh) (as part of the HMS fisheries) and the WA/OR/CA sablefish pot fishery (as part of the West Coast groundfish fisheries), including the taking of threatened and endangered species of marine mammals, were analyzed in: The Pacific Fishery Management Council Highly Migratory Species FMP final environmental impact statement (August 2003); the Pacific Fishery Management Council Proposed Harvest Specifications and Management Measures for the 2013–2014 Pacific Coast Groundfish Fishery and Amendment 21–2 to the Pacific Coast FMP (September 2012); Risk assessment of U.S.

West Coast groundfish fisheries to threatened and endangered marine species (NWFSC, 2012); and in the Final Biological Opinion prepared for the West Coast groundfish fisheries (NMFS, 2012) and the draft Biological Opinion for the CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  inch mesh) (NMFS, 2013), pursuant to the ESA. Because this permit would not modify any fishery operation and the effects of the fishery operations have been evaluated fully in accordance with NEPA, no additional NEPA analysis is required for this permit. Issuing the permit would have no additional impact to the human environment or effects on threatened or endangered species beyond those analyzed in these documents. NMFS now reviews the remaining requirements to issue a permit to take the subject listed species incidental to the CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  inch mesh) and WA/OR/CA sablefish pot fisheries.

#### *Recovery Plans*

Recovery Plans for humpback whales and sperm whales have been completed (see <http://www.nmfs.noaa.gov/pr/recovery/plans.htm#mammals>). Accordingly, the requirement to have recovery plans in place or being developed is satisfied.

#### **Vessel Registration**

MMPA section 118(c) requires that vessels participating in Category I and II fisheries register to obtain an authorization to take marine mammals incidental to fishing activities. Further, section 118(c)(5)(A) provides that registration of vessels in fisheries should, after appropriate consultations, be integrated and coordinated to the maximum extent feasible with existing fisherman licenses, registrations, and related programs. Participants in the CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  inch mesh) and WA/OR/CA sablefish pot fisheries already provide the information needed by NMFS to register their vessels for the incidental take authorization under the MMPA through the Federal groundfish limited entry permit process of the Federal Vessel Monitoring System. Therefore, vessel registration for an MMPA authorization is integrated through those programs in accordance with MMPA section 118.

#### *Monitoring Program*

The CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  inch mesh) has been observed since the early 1990s. Levels of observer coverage vary over years but are adequate to produce reliable estimates of M/SI of listed species (e.g., from 2000–2012, coverage ranged from approximately 12 to 22.9 percent). As part of the West Coast

groundfish fishery and Magnuson-Stevens Fishery Conservation and Management Act objectives, the WA/OR/CA sablefish pot fishery, as managed under the groundfish FMP, and was observed in 2012 at approximately 73 percent. Accordingly, as required by MMPA section 118, a monitoring program is in place for both fisheries.

#### *Take Reduction Plans*

Subject to available funding, MMPA section 118 requires the development and implementation of a Take Reduction Plan (TRP) in cases where a strategic stock interacts with a Category I or II fishery. The two stocks considered for this permit are designated as strategic stocks under the MMPA because they are listed as endangered under the ESA (MMPA section 3(19)(C)).

In 1996, NMFS convened a take reduction team (TRT) to develop a TRP to address the incidental taking of several strategic marine mammal stocks, including CA/OR/WA stocks of sperm whales and humpback whales, in the CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  in mesh). The Pacific Offshore Cetacean TRP was implemented through regulations in October, 1997 (62 FR 51813) and has been in place ever since. Although a TRP is in place for the gillnet fishery, there is not one in place for the pot fishery.

The short- and long-term goals of a TRP are to reduce mortality and serious injury of marine mammals incidental to commercial fishing to levels below PBR and to a zero mortality rate goal, defined by NMFS as 10 percent of PBR, respectively. MMPA section 118(b)(2) states that fisheries maintaining such M/SI levels are not required to further reduce their M/SI rates. However, the obligations to develop and implement a TRP are subject to the availability of funding. NMFS has insufficient funding available to simultaneously develop and implement TRPs for all stocks that interact with Category I or Category II fisheries. MMPA section 118(f)(3) (16 U.S.C. 1387(f)(3)) contains specific priorities for developing TRPs. As provided in MMPA section 118(f)(6)(A) and (f)(7), NMFS used the most recent SARs and LOF as the basis to determine its priorities for establishing TRTs and developing TRPs. Through this process, NMFS evaluated the CA/OR/WA stock of humpback whales and the WA/OR/CA sablefish pot fishery and identified the level of interactions as a lower priority compared to other marine mammal stocks and fisheries for establishing TRTs, based on population trends of the stock and M/SI levels incidental to that commercial fishery. In addition, NMFS continues to collect data to categorize fixed gear fisheries and assess risk to large whales off the U.S. west coast. Accordingly, given these factors and NMFS' priorities, implementation of the developing TRP for the WA/OR/CA sablefish pot trap fishery and other similar Category II fisheries will defer

further development of a TRP for these fisheries under section 118 as other stocks/fisheries are a higher priority for any available funding for establishing new TRTs.

**Current Permit**

As noted in the summary above, all of the requirements to issue a permit to the following Federally-authorized fisheries have been satisfied: the CA thresher shark/swordfish DGN fishery ( $\geq 14$  inch mesh) and WA/OR/CA sablefish pot fishery. Accordingly, NMFS hereby amends the permit to participants in the Category I CA thresher shark/swordfish DGN fishery ( $\geq 14$  inch mesh) fishery for the taking of CA/OR/WA humpback whales and CA/OR/WA sperm whales, and participants in the Category II WA/OR/CA sablefish pot fishery for the taking of CA/OR/WA stock of humpback whales, incidental to the fisheries’ operations. As noted under MMPA section 101(a)(5)(E)(ii), no permit is required for vessels in Category III fisheries. For incidental taking of marine mammals to be authorized in Category III fisheries, M/SI must be reported to NMFS. If NMFS determines at a later date that incidental M/SI from commercial fishing is having more than a negligible impact on the CA/OR/WA stocks of humpback or sperm whales, NMFS may use its emergency authority under MMPA section 118 to protect the stock and may modify the permit issued herein.

MMPA section 101(a)(5)(E) requires NMFS to publish in the Federal Register a list of fisheries that have been authorized to take threatened or endangered marine mammals. A list of such fisheries was most recently published on October 16, 2014 (79 FR 62105), which authorized the taking of threatened or endangered marine mammals incidental to the Hawaii deep-set and shallow-set longline fisheries. With issuance of this current amended permit, NMFS is not adding any fisheries to this list (Table 1).

Table 1. List of Fisheries Authorized to Take Specific Threatened and Endangered Marine Mammals Incidental to Commercial Fishing Operations.

Fishery	Category	Marine Mammal Stock
HI deep-set (tuna target) longline	I	Humpback whale, CNP stock Sperm whale, Hawaii stock False killer whale, MHI IFKW stock
CA thresher shark/swordfish drift gillnet fishery (>14 in mesh)	I	Fin whale, CA/OR/WA stock Humpback whale, CA/OR/WA stock

		Sperm whale, CA/OR/WA stock
HI shallow-set (swordfish target) longline/set line	II	Humpback whale, CNP stock
AK Bering Sea/Aleutian Islands flatfish trawl	II	Steller sea lion, Western U.S. stock
AK Bering Sea/Aleutian Island pollock trawl	II	Fin whale, NEP stock Steller sea lion, Western U.S. stock
AK Bering Sea sablefish pot	II	Humpback whale, WNP stock Humpback whale, CNP stock
AK Bering Sea/Aleutian Islands Pacific cod longline fisheries	II	Steller sea lion, Western U.S. stock
WA/OR/CA sablefish pot fishery	II	Humpback whale, CA/OR/WA stock

### Comments and Responses

NMFS received letters containing comments from three organizations, the Marine Mammal Commission (Commission), the Humane Society of the United States (HSUS), and the Center for Biological Diversity. NMFS also received two letters from private citizens.

*Comment 1:* The Commission briefly summarized NMFS' findings for the proposed permit and agreed with NMFS' analyses and actions proposed for the CA/OR/WA humpback whale stock and has no further comments or recommendations pertaining to that stock.

*Response:* NMFS appreciates the Commission's comment and agrees with issuing the permit as required by the MMPA.

*Comment 2:* The Commission recommended that NMFS be explicit in future negligible impact determinations and stock assessment reports using a non-standard averaging period about the factors it considered and the quantitative or qualitative criteria used to decide whether substantial and significant changes in the system consisting of the fishery and the CA/OR/WA sperm whale stock have or have not occurred. Further, the Commission recommended that NMFS define the circumstances under which non-standard averaging periods are

appropriate. The Commission noted that the shift toward a longer-term view of the CA/OR/WA sperm whale stock and its interactions with the CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  in mesh) is appropriate but has risk when averaging mortality and serious injury over longer periods of time relative to NMFS' ability to detect and respond to significant changes in the sperm whale bycatch rate.

*Response:* The guidelines for preparing marine mammal stock assessments (GAMMS) provide a general recommendation to pool bycatch over a period of 5 years, but also note that: "It is suggested that mortality estimates could be averaged over as many years necessary to achieve a CV of less than or equal to 0.3, but should usually not be averaged over a time period of more than the most recent 5 years for which data have been analyzed. However, information that is more than 5 years old should not be ignored if it is the most appropriate information available in a particular case." (NMFS 2005). However, the guidance for 5-year averaging is based on bycatch being a relatively common event with adequate sample sizes and sufficient observer coverage. Pooling over longer periods is acceptable, if additional years accurately represent the current state of the fisheries and their inclusion reduces estimation bias. Two major factors were considered in using a pooling period in excess of 5 years: 1) demonstration that the five-year period used in most stock assessments is itself subjective and is insufficient to generate unbiased estimates of bycatch for rare events (Carretta and Moore 2014), and 2) recognition that a fishery closure was implemented in 2001 that limits fishing spatially and seasonally to areas that represent lower bycatch risk to sperm whales. Thus, bycatch is pooled from 2001 to 2013, to reflect current fishing practices and current fishing effort. Both considerations are outlined in the draft 2014 marine mammal stock assessment for CA/OR/WA sperm whales (Carretta *et al.* 2014b). Alternatively, one may use models that pool  $> 5$  years of bycatch data to obtain statistically robust and unbiased bycatch rate estimates and apply these to individual years. NMFS has previously done this for other species, such as harbor porpoise (Orphanides 2009).

NMFS appreciates the Commission's support for using the longer time frame for evaluating the CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  in mesh) interactions with the CA/OR/WA sperm whale stock. NMFS acknowledges the Commission's concern regarding the use of longer-term data in the case of rare bycatch events (*i.e.*, where the 13 years used to compute the mortality and serious injury rate have several years where recorded bycatch is zero and the influence those zeros have on the mean). However, Carretta and Moore (2014) determine that the post-2000 time period best represents the current spatial state of the fishery and use the same time

period to calculate mean annual bycatch estimate for the CA/OR/WA stock of sperm whales, consistent with recommendations in the GAMMS. Annual estimates of bycatch events in the fishery, and subsequent longer term averaging of those data, would necessitate an evaluation that the conditions supporting the use of the longer term period are still valid; for example, that fishery characteristics are still constant or relatively unchanged. NMFS is mindful that increases in rate of expected annual bycatch could be a signal that something is changing in the system and further action is needed.

*Comment 3:* The Commission recommended that NMFS continue to monitor the CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  in mesh) and if the observed or reported mortality and serious injury of sperm whales exceeds the level specified in the Incidental Take Statement (the Commission is referencing the Incidental Take Statement in the Biological Opinion issued on May 2, 2013), that the following occur: 1) reinitiation of formal consultation; 2) a reassessment of the MMPA negligible impact; and, 3) reconvene the Pacific Offshore Take Reduction Team (POCTRT) to consider whether additional measures are necessary to reduce the probability of interactions.

*Response:* The CA thresher shark/swordfish DGN fishery ( $\geq 14$  inch mesh) has been observed by NMFS-certified observers since the early 1990s. NMFS targets 20% observer coverage in this fishery and levels vary over time but are adequate to produce reliable estimates of mortality and serious injury of marine mammals. If mortality or serious injury exceeded the level specified in the Incidental Take Statement of the Biological Opinion issued by NMFS on May 2, 2013, the following would occur, as is standard practice: 1) Reinitiation of consultation under Section 7 of the Endangered Species Act, which is described in Section XI, titled Reinitiation Notice of the Biological Opinion; 2) Reevaluation of the negligible impact determination, although no change may be necessary; and, 3) Reconvening the POCTRT, if appropriate (but note that an in-person meeting would be subject to the availability of funding).

*Comment 4:* The Commission requested that NMFS further justify its negligible impact determination for sperm whales under Criterion 3 given the requirement of “certainty of data” that the population is stable or increasing, given the substantial uncertainty regarding the population trend.

*Response:* NMFS used the best available science in making the negligible impact determination. Moore and Barlow (2014) report that the abundance of sperm whales appeared stable from 1991 to 2008, but that any reliable

conclusions on trends could not be made for the whole population because the precision of estimated growth rates was poor. However, they also reported that trends in the detection of single animals (presumably large, solitary males) apparently doubled over this time period. The authors could not determine if the apparent increase in sightings comprising single animals reflected an increase in the number of adult male sperm whales in the population or merely increased use of the U.S. west coast waters by adult males in recent years. Therefore, because the stock is not decreasing, it is considered to be either stable or increasing.

*Comment 5:* The Commission requested that NMFS review and improve the criteria for making a negligible impact determination before any more such determinations are issued.

*Response:* NMFS agrees that the criteria for establishing a negligible impact determination under section 101(a)(5)(E) of the MMPA should be reviewed and appreciates the Commission's willingness to work with NMFS to review and, if necessary, modify the criteria. NMFS appreciates the Commission's recommendation to refrain from issuing more permits until new criteria are established; however, given the time it would take to develop criteria, solicit public review and comment, and issue the final criteria, NMFS will still need to evaluate fisheries that are taking threatened or endangered marine mammals and, if a negligible impact determination can be made for those fisheries, issue a permit under MMPA 101(a)(5)(E).

*Comment 6:* The Humane Society of the United States (HSUS) expressed concern with NMFS' use of a PBR for sperm whales that was from the Moore and Barlow (2014) paper as it differs substantially from the PBR published in the 2013 SAR (*i.e.*, 1.5 in the 2013 SAR vs. 2.7 in Moore and Barlow 2014). Additionally, NMFS' proposal to calculate the annual average serious injury and mortality using 13 years of data was based on a novel approach in a non-peer reviewed tech memo (Carretta and Moore 2014). HSUS stated that it was inappropriate for NMFS to rely upon estimates of mortality that are calculated in a manner that differs from traditional methods used in the SARs and has not undergone public scrutiny.

*Response:* NMFS acknowledges that there was a difference in the PBR estimate used in the negligible impact determination for the CA/OR/WA sperm whale stock when comparing Moore and Barlow's (2014) estimate of 2.7 to the most recent final SAR (PBR for the CA/OR/WA sperm whale stock is 1.5; Carretta *et al.* 2014a). The revised negligible impact determination relies upon the PBR for the CA/OR/WA sperm whale stock based on Moore

and Barlow (2014) and is included in the draft 2014 SAR (Carretta *et al.* 2014b), which is publically available for review and comment (80 FR 4881, January 29, 2015).

Regarding use of the 13-year timeframe, we refer to our response to Comment 2. NMFS must use the best available scientific information in making its determination. This information is not limited to just what has been published in SARs, but information that has been published or otherwise made available and that NMFS determines represents the best information to use. NOAA's Southwest Fisheries Science Center uses the NOAA Technical Memorandum series to issue scientific and technical publications. These manuscripts have been peer reviewed and edited, and documents published in this series may be cited in the scientific and technical literature. Additionally, these analyses were considered at the 2014 Pacific Science Review Group meeting and were reviewed and accepted by that Group.

*Comment 7:* Regarding the CA/OR/WA stock of sperm whales, HSUS pointed out that the **Federal Register** Notice (79 FR 50626; August 25, 2014) proposing a negligible impact determination includes a statement that the paper by Moore and Barlow “suggest[s] that the revised abundance estimates are higher and more stable across years than currently published values” and NMFS assumes an increasing trend. HSUS indicates that this assumption lacks important caveats that are stated in the Moore and Barlow paper such as the authors “were unable to precisely estimate overall abundance trends for sperm whales in the study area.” Further “whether this trend reflects a population-level increase in adult male abundance or merely increased use of the study area by adult males is not possible to say from the data” and go on to say that the authors were “unable to obtain good estimates of abundance trends for the entire California-Oregon-Washington stock of sperm whales.”

*Response:* NMFS did not assume an increasing trend. We assumed, based on the best available science, that sperm whale abundance was not decreasing: therefore, it must either be stable or increasing. Refer to our response in Comment 4 regarding the abundance and trend for the CA/OR/WA sperm whale stock. Because of the information provided in Moore and Barlow (2014) on the abundance of male sperm whales and the uncertainty in the cause of those results (e.g., whether this trend reflects a population-level increase in adult male abundance or merely increased use of the study area by adult males), we did not separate our analysis by gender but assumed that the stock was either stable or increasing. We further acknowledge that the true stock size may be larger, because not all animals are in U.S. waters when surveys are conducted. Although there will always be some uncertainty relative to

the population abundance of sperm whales (as there is always some inherent uncertainty in any population estimate), the apparent trend for sperm whales in the Pacific Ocean is stable or increasing, and this is occurring even with current levels of mortality and serious injury.

*Comment 8:* HSUS referenced the Pacific Fishery Management Council's (PFMC) consideration of imposing additional measures on the CA thresher shark/swordfish DGN fishery ( $\geq 14$  inch mesh) that appear to be necessary to assure that the fishery does not repeat the events of 2010 in which 2 sperm whales suffered mortality or serious injury. HSUS maintains that a negligible impact determination is premature at this time because management measures have not substantively changed since the takes in 2010 and the PFMC itself believes that there is a need to impose caps and other management measure to ensure that takes are sustainable.

*Response:* The PFMC met September 12-17, November 14-19, 2014, and March 6-12, 2015, to deliberate management measures, including hard caps (or limits on the number of animals that can be taken in the fishery). The PFMC has directed its Highly Migratory Species management team to consider hard caps, but the management team has not developed recommendations at this time. NMFS cannot predict what the PFMC regulatory decisions may be, but at this time, we are able to make a negligible impact determination and satisfy the requirements under Criterion 3 for the CA/OR/WA sperm whale stock. In addition, under Section 118 of the MMPA, take reduction plans are designed to recover and prevent the depletion of strategic marine mammal stocks that interact with Category I and II fisheries. The goal of the Pacific Offshore Cetacean Take Reduction Plan is to reduce serious injuries and deaths of several marine mammal stocks incidental to the CA thresher shark/swordfish drift gillnet fishery ( $\geq 14$  in mesh).

*Comment 9:* One member of the public stated concern that the negligible impact determination is not precautionary and deviates from well-established methods. They requested that NMFS provide more justification and conduct more research before the permit can be evaluated properly.

*Response:* Regarding pooling of bycatch data, see response to Comment 2. NOAA's ability to conduct research is dependent on funding and resources; however, the NMFS Southwest Fisheries Science Center recently conducted a research cruise called the California Current Cetacean and Ecosystem Assessment Survey, from August 5 to December 10, 2014, that surveyed the U.S. Exclusive Economic Zone and beyond. It is expected that results from this survey will provide updated information on marine mammal stocks in this area.

*Comment 10:* One individual stated that without any new data, NMFS is reversing its 2013 conclusion that emergency measures were necessary to ensure a negligible impact. Specifically, the use of the longer-time series to inflate sperm whale estimates far above what have been observed in recent surveys (for example, the most recent 2008 abundance point estimate is only 300 whales) and is deflating the estimated bycatch mortality by adding years of data in with no bycatch was observed. Further, the commenter stated that the proposed protections do not go far enough to protect sperm whales and the fishery should not be permitted to operate without protections that are at least as strong as the emergency measures put in place last year. It was requested that NMFS consider immediately reinstating hard caps to protect sperm whales in the drift gillnet fishery.

*Response:* NMFS appreciates the comment and references its responses to Comments 2 and 5. Additionally, NMFS is not reversing its 2013 conclusion, rather we are amending it because since that time, there have been significant changes in the information and conditions used to make the negligible impact determination on September 4, 2013 (78 FR 54553). This MMPA 101(a)(5)(E) permit amends the previously issued permit, updates the information on the known biological and ecological data on sperm whales and humpback whales, and updates information on human-caused mortality and serious injury. The emergency rule was temporary and; therefore, when the new information became available, NMFS evaluated it and determined that the previous negligible impact analysis should be amended, while maintaining the same expiration date of September 4, 2016 for the permit.

Fisheries-related mortality and serious injury is a rare event for sperm whales. Given observer coverage of approximately 15%, the annual estimate of bycatch will always be either zero (if none observed) or at least 7 (if  $\geq 1$  observed), for estimates made using ratio methods. If the true average value for mortality and serious injury is  $> 0$  but less than a few animals per year, and if observer coverage generally remains  $< 20\%$ , then multiple years of data need to be pooled to for unbiased estimation of a mean annual rate (Carretta and Moore 2014). Pooling more years reduces bias and provides increased precision of estimates and thus, a better estimate of the long-term annual mortality and serious injury, which is what should be compared to PBR (barring changes to the fishery that could result in increased interaction rates not represented by historical data). NMFS has previously done this type of bycatch analysis for other species, such as loggerhead sea turtles (Murray 2006) and harbor porpoise (Orphanides 2009). NMFS acknowledges the commenter's concern regarding the use of longer-term data in the case of rare

bycatch events (*i.e.*, where the 13 years used to compute the mortality and serious injury rate have several years where recorded bycatch is zero) and refers back to our response in Comment 2. Regarding hard caps, we refer to the response to Comment 7. The negligible impact determination and permit is issued under section 101(a)(5)(E) of the MMPA, which is separate from the PFMC's deliberations.

Dated: April 17, 2015.

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Donna S. Wieting,  
Director,  
Office of Protected Resources,  
National Marine Fisheries Service.

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