Via electronic and certified mail

September 7, 2021

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Re: 60-Day Notice of Intent to Sue: Violations of the Endangered Species Act Related to the California/Oregon/Washington Sablefish Pot Fishery

Dear Secretary Raimondo, Director Marzin, and Regional Administrator Thom:

On behalf of the Center for Biological Diversity (the "Center"), this letter serves as a sixty-day notice of intent to sue the National Marine Fisheries Service ("NMFS") over violations of sections 7 and 9 of the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531-1544, for actions and inactions related to the management and authorization of the California/Oregon/Washington sablefish pot fishery ("Fishery").

First, NMFS's continued authorization of the Fishery without a valid permit to take ESA-listed humpback whales violates the ESA's prohibition on take of endangered animals. To authorize the lawful take of ESA-listed marine mammals, the ESA requires a Marine Mammal Protection Act ("MMPA") authorization, which for this Fishery expired September 4, 2016.[1] Accordingly, the continuing take of humpback whales during the Fishery's operation is unlawful.

Second, NMFS failed to use the best available science in its 2020 biological opinion on the Continuing Operation of the Pacific Coast Groundfish Fishery ("Biological Opinion").[2] It

[1] 16 U.S.C. § 1536(b)(4); *Taking of Threatened or Endangered Marine Mammals Incidental to Commercial Fishing Operations; Issuance of Permit, Notice*, 80 Fed. Reg. 22709 (Apr. 23, 2015) (amending the permit issued on September 4, 2013).
[2] Endangered Species Act Biological Opinion, Continuing Operation of the Pacific Coast Groundfish Fishery (Reinitiation of consultation #NWR-2012-876) – Humpback whale (*Megaptera novaeangliae*),

failed to consider: (1) NMFS's determination that the Central America population is a demographically independent population and that the stock assessment is outdated, (2) scientific papers assessing the Fishery's entanglement risk for humpback whales, and (3) estimates of humpback mortality from ship strikes that are several times higher than those in the Biological Opinion. NMFS's reliance on this legally flawed Biological Opinion to authorize the Fishery violates the agency's duty to ensure its actions are not likely to jeopardize the continued existence of ESA-listed humpback whales or destroy or adversely modify their critical habitat.[3]

Third, NMFS must reinitiate consultation in light of new information since publication of the Biological Opinion that reveals effects of the Fishery on humpback whales and their critical habitat to an extent NMFS has not previously considered.[4] This new information includes: (1) at least three scientific papers that present new information relevant to assessing the effects of the Fishery on humpback whales, and (2) the final humpback whale critical habitat rule that added specific examples to the descriptions of the prey feature for each humpback whale distinct population segment, plus new information showing that humpback whales' prey abundance is severely compromised. NMFS's ongoing failure to reinitiate and complete consultation violates section 7 of the ESA.

To remedy these legal deficiencies, we request that NMFS propose an emergency regulation to remain in place until NMFS has published a new biological opinion that includes an incidental take statement for humpback whales. The emergency rule would close the Fishery in humpback whale critical habitat unless ropeless or popup fishing gear is used.

Ropeless fishing gear is a solution to the entanglement problem afflicting the Fishery. This gear, also known as "on-demand" or "pop-up buoy" gear, eliminates or reduces the risk of entanglement by removing the unattended vertical line running through the water column. It is the only way to prevent entanglements while allowing fishing to continue without ESA authorizations. We urge NMFS to consider seriously its implementation as soon as possible.

I. Legal Background

Congress enacted the ESA, in part, to provide a "means whereby the ecosystems upon which endangered species and threatened species depend may be conserved . . . [and] a program for the conservation of such endangered species and threatened species."[5]

Section 2(c) of the ESA establishes that it is "the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act."[6] The ESA defines "conservation" to mean "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to

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NMFS Consultation Number WCRO-2018-01378; *see* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(d), (g).

[3] 16 U.S.C. § 1536(a)(2).

[4] *Id.*; 50 C.F.R. § 402.16.

[5] 16 U.S.C. § 1531(b).

[6] *Id.* § 1531(c)(1).

this Act are no longer necessary."[7] Similarly, section 7(a)(1) of the ESA directs that NMFS and other federal agencies shall use their programs and authorities to conserve endangered and threatened species.[8]

To fulfill the purposes of the ESA, section 9 of the ESA prohibits any "person" from "taking" any endangered species, including endangered humpback whales.[9] This take prohibition also applies to threatened humpback whales.[10] The term "take" means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."[11] Incidental take is defined as take that is incidental to, and not for the purpose of, the carrying out of an otherwise lawful activity.[12]

Additionally, section 7(a)(2) of the ESA requires federal agencies to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [their federally designated critical] habitat."[13] To comply with this mandate, section 7(a)(2) requires federal agencies to consult with the departments of Commerce or Interior whenever their actions "may affect" a listed species and utilize the "best scientific and commercial data available" in doing so.[14]

Where, as here, NMFS is both the action agency and the consulting agency, NMFS must undertake intra-agency consultation. At the completion of consultation, the consulting branch of NMFS issues a biological opinion that determines whether the action is likely to jeopardize the continued existence of the species. If NMFS concludes that the action will not cause jeopardy, but may result in the take of endangered species, NMFS will issue an incidental take statement ("ITS") that specifies "the impact, i.e., the amount or extent, of . . . incidental taking" that may occur.[15] An ITS must include "reasonable and prudent measures . . . necessary . . . to minimize such impact,[16] and must specify the permissible level of taking, "thus . . . serv[ing] as a check on the agency's original decision that the incidental take of listed species resulting from the proposed action will not [jeopardize the continued existence of the species]."[17] Additionally, when the endangered species to be taken are marine mammals, the ITS must also "specif[y] those measures that are necessary to comply with section 1371(a)(5) of this title [the MMPA's section 101(a)(5)] with regard to such taking."[18] The take of a listed species in compliance with the terms of a valid ITS is not prohibited under section 9 of the ESA.[19]

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[7] *Id.* § 1532(3).
[8] *Id.* § 1536(a)(1).
[9] *Id.* § 1538.
[10] 50 C.F.R. § 223.213.
[11] 16 U.S.C. § 1532(19).
[12] *Id.* § 1539(a)(1)(B).
[13] *Id.* § 1536(a)(2); 50 C.F.R. § 402.14(a).
[14] 16 U.S.C. § 1536(a)(2).
[15] 50 C.F.R. § 402.14(h)(4).
[16] 16 U.S.C. § 1536(b)(4).
[17] *Id.*; *Center for Biological Diversity v. Salazar*, 695 F.3d 893, 911 (9th Cir. 2012).
[18] 16 U.S.C. § 1536(b)(4)(C)(iii).
[19] *Id.* §§ 1536(b)(4), (o)(2); 50 C.F.R. § 402.14(i)(5).

After the issuance of a final biological opinion and "where discretionary Federal involvement or control over the action has been retained or is authorized by law," the agency must reinitiate formal consultation if, among other things, "the amount or extent of taking specified in the incidental take statement is exceeded;" "new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;" or "a new species is listed…that may be affected by the identified action."[20]

The MMPA places a moratorium on the taking of marine mammals, and only after invoking limited exceptions to this moratorium may NMFS allow take incidental to commercial fishing operations.[21] Specifically, MMPA section 101(a)(5)(E) requires that for endangered or threatened marine mammals, NMFS must make a finding that any incidental mortality or serious injury from commercial fisheries will have a negligible impact on such species or stock. Therefore, NMFS may only authorize incidental take of endangered marine mammals when it has authorized take under both the MMPA and the ESA.

II. NMFS Is Causing Ongoing Humpback Whale-Fishery Interactions in Violation of ESA Section 9

Since 2014's drastic increase in reported West Coast whale entanglements, fishery entanglements of humpback whales have remained a serious conservation problem. In 2020, NMFS confirmed 17 entangled whales off the West Coast.[22] This is fewer confirmed reports than in any year since 2013 yet is still far too high and represents an underestimate of whales entangled. The actual entanglements are likely far higher because most confirmed reports come from opportunistic sightings of entangled whales. Decreases in monitoring effort (e.g., whale watching) during the pandemic may have led to decreases in confirmed reports.

The Fishery entangles humpback whales in sablefish pot gear, which is set in approximately two-mile-long strings of 30 to 50 pots and fished generally from April to October. NMFS records since 1982 include five confirmed humpback whale entanglements involving sablefish pot gear.[23] One of the entanglements was reported in August 2006. More recent entanglements occurred in October 2014, two in 2016 in April and May, and one in July 2017.[24] In the 2014 report and one of the entanglements in 2016, the gear was originally set in Oregon, while the set location for the other entanglements are unknown. More details about the four most recent confirmed entanglements are below.[25]

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[20] 50 C.F.R. § 402.16.

[21] 16 U.S.C. § 1371(a) ("There shall be a moratorium on the taking and importation of marine mammals . . . during which time no permit may be issued for the taking of any marine mammal . . . except in the following cases").

[22] NOAA Fisheries, 2020 West Coast Whale Entanglement Summary, (2021). https://media.fisheries.noaa.gov/2021-03/2020_West_Coast_Whale_Entanglement_Summary.pdf?null.

[23] Saez, L., D. Lawson, and M. DeAngelis. "Large whale entanglements off the U.S. West Coast, from 1982-2017." NOAA Tech. Memo. NMFS-OPR-63A, 50 p. (2021) https://www.fisheries.noaa.gov/resource/document/large-whale-entanglements-us-west-coast-1982-2017.

[24] *Id.*

[25] The captures of two humpback whales by vessels using trawl gear in 2020 are described in the biological opinion and will not be repeated here because to our knowledge NMFS has not released additional information about the entanglements.

A. Directly Observed Humpback Whale-Fishery Interactions

One humpback interaction was observed in 2014.[26] In October 2014, an observer aboard a limited entry sablefish pot vessel fishing off the Washington/Oregon border saw a deceased adult humpback whale brought next to the vessel while recovering a string of approximately 35 pots with weighted line between traps. The whale had apparently been caught in a portion of the ground line between the pots and drowned.

This event prompted a deckhand on the vessel to report a similar encounter on another limited entry sablefish vessel two months prior. At that time, the whale was entangled in the buoy line. The crew was able to pull the whale's tail near the rail of the vessel and cut the line with knives in hand to free it and the whale was able to swim away.

Two reports of entanglements in 2016 were attributed to the sablefish pot fishery.[27] In April 2016 a fisherman and fishery observer disentangled a humpback from sablefish gear off Humboldt, California. It was unclear whether the whale was fully disentangled. In May 2016, a juvenile humpback was disentangled off Oregon. It had been entangled with ¾" line with sablefish pot gear, three poly balls and a high flyer. The entire gear set included a total of 37 traps set at intervals at 220 fathoms and 80-pound anchors at each end. The whale swam away from the disentanglement efforts with about three feet of line on its tail.

The 2017 humpback whale entanglement involved a mooring line set during the operation of sablefish pot fishing, and the whale subsequently became entangled with multiple sets of coonstripe shrimp traps as well.[28] While additional corroborating information is provided in NMFS's annual report on marine mammal serious injury and mortality,[29] the Biological Opinion mentions this interaction only briefly.[30]

B. Estimated Humpback Whale-Fishery Interactions

Pot and trap fisheries in general represent the majority of documented fishery interactions with humpbacks along the U.S. West Coast, yet the number of observed humpback whales caught in the Fishery is relatively low, so NMFS has estimated the bycatch in the Fishery's pots

[26] J. Carretta, et al. 2016. Sources of human-related injury and mortality for U.S. Pacific West Coast Marine Mammal Stock Assessments, 2010-2014. NOAA-TM-NMFS-SWFSC-554, at 92, https://docs.lib.noaa.gov/noaa_documents/NMFS/SWFSC/TM_NMFS_SWFSC/NOAA-TM-NMFS-SWFSC-554.pdf.
[27] NMFS. 2016. West Coast Entanglement Summary: Overview of Entanglement Data. March 2017. http://www.westcoast fisheries.noaa.gov/mediacenter/WCR%202016%20Whale%20Entanglements_3-26-17_Final.pdf.
[28] Saez et al. 2021.
[29] Carretta, J.V., et al. "Sources of Human-related Injury and Mortality for U.S. Pacific West Coast Marine Mammal Stock Assessments," 2015-2019. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-SWFSC-643 (2021).
[30] Biological Opinion at 45 ("In addition, during this period (2011-2017), there have also been three other humpback whale entanglements reported to NMFS through opportunistic observations from ocean users that have been identified as involving sablefish pot gear; one in 2006, 2016, and 2017.").

(Table 1). NMFS has estimated that more than one humpback whale has been caught every year since 2003.[31]

Table 1. Bycatch estimates of humpback whale observed bycatch in the Limited Entry (LE) and Open Access (OA) pot fishery.[32]

Year	Mean (LE)	Lower 95% CI	Upper 95% CI	Mean (OA)	Lower 95% CI	Upper 95% CI	Total
2002	**0.35**	0.00	1.38	**N/A**	N/A	N/A	**0.35**
2003	**0.41**	0.00	1.43	**9.00**	0.10	30.34	**9.41**
2004	**0.74**	0.00	2.95	**2.99**	0.09	8.91	**3.73**
2005	**0.16**	0.00	0.65	**5.12**	0.10	17.30	**5.28**
2006	**0.26**	0.00	0.98	**7.63**	0.10	25.85	**7.89**
2007	**0.43**	0.00	1.82	**5.12**	0.10	17.10	**5.55**
2008	**0.11**	0.00	0.48	**3.98**	0.19	13.70	**4.09**
2009	**0.65**	0.00	2.42	**5.73**	0.00	18.45	**6.38**
2010	**0.38**	0.00	1.37	**4.92**	0.09	16.24	**5.30**
2011	**0.20**	0.00	0.82	**2.27**	0.00	7.50	**2.47**
2012	**0.29**	0.00	1.04	**2.14**	0.00	7.14	**2.43**
2013	**0.55**	0.00	2.32	**1.42**	0.00	4.75	**1.97**
2014	**1.26**	1.00	2.04	**1.90**	0.00	6.26	**3.16**
2015	**0.07**	0.00	0.31	**2.23**	0.00	7.39	**2.30**
2016	**0.07**	0.00	0.26	**3.19**	1.00	8.41	**3.26**
2017	**0.25**	0.00	1.04	**1.73**	0.00	5.12	**1.98**
2018	**0.06**	0.00	0.26	**1.72**	0.00	5.41	**1.78**
2019	**0.17**	0.00	0.65	**1.43**	0.00	4.73	**1.60**

These ongoing interactions violate section 9 of the ESA because the Biological Opinion fails to include an ITS for humpback whales "because the incidental take of humpback whales has not been authorized under section 101(a)(5)(E) of the Marine Mammal Protection Act (MMPA) (see 16 U.S.C. 1536(b)(4)(C))."[33] The Biological Opinion further states that "NMFS is actively pursuing an authorization under section 101(a)(5)(E) and anticipates a proposed authorization may be available in late 2020 or early 2021."[34] To our knowledge NMFS has not received such authorization or provided an update on when a proposed authorization will be available.

As the agency that authorizes and manages the Fishery,[35] NMFS is liable for any take of ESA-listed species that results from operation of the Fishery. By continuing to permit, authorize,

[31] Hanson, M.B., et al. "Estimated Humpback Whale Bycatch in the U.S. West Coast Groundfish Fisheries, 2002-2019." Pacific Fishery Management Council Agenda Item G.4.a, NMFS Report 4, Appendices 1 and 2, June 2021.
[32] *Id.*
[33] Biological Opinion at 63.
[34] *Id.*
[35] 50 C.F.R. § 660.25.

and manage the Fishery, NMFS's actions and inactions have caused, and will continue to cause, the unpermitted take of endangered humpback whales in the Central America distinct population segment ("DPS") and threatened humpback whales in the Mexico DPS in violation of section 9 of the ESA.[36]

III. The Biological Opinion Does Not Include the Best Available Science and NMFS's Reliance on the Biological Opinion Violates Its ESA Section 7 Duties.

The Biological Opinion fails to consider the best scientific data available with respect to estimating the abundance of the Central America DPS and Mexico DPS of humpback whales, the entanglement risk of the Fishery, and the estimates of humpback whale mortality from ships strikes.

A. There Is No Data To Support NMFS's Assumption That ESA-Listed Humpback DPSs Have Increased Six Percent Annually For Fifteen Years.

First, the Biological Opinion does not adequately consider that NMFS has recognized that the Central America population is a demographically independent population ("DIP") under the MMPA and that the stock assessment's stock designation for humpback whales should be considered for revision.[37] In 2019 NMFS released guidance on "Reviewing and Designating Stocks" that reiterated "that a stock generally comprises a single DIP," though in relatively few cases this may be impractical.[38] In 2019 NMFS also published a handbook for delineating marine mammals DIPs, which stated that

> the endangered Central American distinct population segment (DPS) . . . contains a single migratory herd and also comprises a single DIP. A known threat is entanglement in California. Thus, the boundary for this DIP would run from Central America, through its migratory corridor in Mexico and to California and Oregon.[39]

This paragraph clearly states that the Central America population is not only a DPS under the ESA but also a DIP under the MMPA.

Rather than considering this information, the Biological Opinion relied on studies concluding that West Coast humpback whales (including populations not listed under the ESA) have increased over 30+ years to assume that the endangered Central America DPS and threatened Mexico DPS have increased likewise:

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[36] 16 U.S.C. § 1538.
[37] Procedural Directive 02-204-03: Reviewing and Designating Stocks and Issuing Stock Assessment Reports under the Marine Mammal Protection Act (November 2019); *2019 Marine Mammal Stock Assessment Reports, Notice; response to comments*, 85 Fed. Reg. 46589, 46591 (Aug. 3, 2020).
[38] Procedural Directive 02-204-03 (2019) at 2.
[39] Martien, K.K. et al. "The DIP Delineation Handbook: A Guide to Using Multiple Lines of Evidence to Delineate Demographically Independent Populations of Marine Mammals." U.S. Department of Commerce, NOAA Technical Memorandum NMFS-SWFSC-622 (2019) at 33-34.

> if we assume that the population estimated by Wade (2017) based on information from 2004-2006 (783 animals) has increased by 6 percent annually in the last 15 years, the current abundance estimate of the [Central American DPS] would be 1,876 animals.[40]

This leap of logic assumes that an increase in humpbacks generally, including unlisted humpbacks, means that there has been an increase in a small, endangered humpback whale DPS. Nowhere in the Biological Opinion does NMFS explain how the Central America population can be a DIP and have the same abundance trend as West Coast humpbacks as a whole. Rather, NMFS does "not know whether these increases are applicable to all three DPSs that forage" off the West Coast.[41]

This has potentially significant conservation implications for the endangered Central America DPS, which in 2016 NMFS estimated had 411 individuals.[42] The handbook also listed the abundance of the Central America DIP as 411.[43] If the Central America DPS were considered a stock under the MMPA, the potential biological removal level ("PBR") would be less than one whale.[44] (The Guidance on revising stock assessment reports states that it "should provide DIP-specific information where available, including a DIP-specific PBR if it can be calculated."[45]) Thus the Fishery's mortality and serious injury of humpback whales potentially has severe population-level impacts.

The Biological Opinion's reliance on the abundance trends for the outdated stock designation of California/Oregon/Washington humpback whales is inexplicable. NMFS has stated repeatedly in the *Federal Register* that the California/Oregon/Washington humpback whale stock should be considered for stock designation revisions and that NMFS intends to address these revisions in future SARs.[46] Yet the Biological Opinion cites two sources for an increase in humpback whales, both of which only estimate abundance for the outdated humpback stock.[47]

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[40] Biological Opinion at 28 (replacing Mexico DPS with Central American DPS to correct what seems to be a copy-and-paste mistake); *see also id.* at 61 (estimating there to be "approximately 1,876 whales given a 6 percent increase over the last 15 years, [so] we expect there to be a maximum impact to the DPS of 0.53 percent of abundance").
[41] Biological Opinion at 29.
[42] Endangered and Threatened Species; Identification of 14 Distinct Population Segments of the Humpback Whale (*Megaptera novaeangliae*) and Revision of Species-Wide Listing; Final Rule, 81 Fed. Reg. 62,260, 62307 (Sept. 8, 2016).
[43] *Id.* Figure 5.1.
[44] Letter from Rebecca J. Lent, Ph.D., Executive Director, Marine Mammal Commission, to Chris Yates, National Marine Fisheries Service, West Coast Region, dated Feb. 13, 2017, regarding 82 Fed. Reg. 2,954 (Jan. 10, 2017).
[45] Procedural Directive 02-204-03 (2019) at 8.
[46] *See, e.g.,* 85 Fed. Reg. 46590-91; *2020 Marine Mammal Stock Assessment Reports, Notice; response to comments*, 86 Fed. Reg. 38991, 39001 (July 23, 2021).
[47] Biological Opinion at 60 (citing Carretta et al. (2020) and Calambokidis and Barlow (2020)).

B. NMFS Ignored Its Own Studies Of Fishery Entanglement Risk.

Second, NMFS has published scientific papers assessing the Fishery's entanglement risk for humpback whales that it did not consider in the Biological Opinion. The first paper, Saez et al. (2013), performed an entanglement risk assessment for eleven fisheries, including Washington/Oregon/California sablefish pot.[48] Sablefish pots and sablefish longline tied for the third-highest entanglement risk for humpback whales.[49] The model identified areas of elevated risk for where and when large whales are more likely to encounter fixed commercial gear and possibly become entangled.[50] The Biological Opinion unlawfully failed to consider this scientific data about the impact of the Fishery on humpback whales.

Similarly, Feist et al. (2015) overlaid the predicted densities of humpback whales with data for commercial fishing effort of the fixed-gear (pots), at-sea hake mid-water trawl, and bottom trawl fleets of the West Coast groundfish fishery. [51] The authors, all NMFS scientists, characterized the study as an important first step "in generating formal risk assessments for quantification of the impacts of various fishing fleets on populations of cetacean species that occur in the California Current."[52] The paper found that for "the observed fixed fleet, peak areas of overlap with the humpback whale (*R*s>17) occurred north of Cape Mendocino, California, off the central Oregon coast, and off Astoria Canyon, Oregon." This information is helpful in describing the areas and gears in the Fishery that have highest entanglement risk. Yet this paper too was ignored by NMFS in the Biological Opinion.

C. Ship Strike Mortality For Humpback Whales Is Higher Than Observed Mortality and Exceeds Relevant Biological Thresholds For Anthropogenic Death.

Third, NMFS did not properly consider the high level of humpback mortality from ship strikes in the Biological Opinion. Specifically, published science shows that (1) whale mortality from ship strikes is many times greater than observed mortality; and (2) this mortality is negatively impacting whale recovery. [53] Rockwood *et al*. (2017) concluded that "mortality estimates" for humpback whales, in addition to other endangered whales, are "far higher than current estimates."[54] Even the study's most conservative model estimated mortality to be 7.8 times higher than NMFS's recommended serious injury and mortality limit (i.e. potential biological removal level) for humpback whales.[55] A 2019 follow-up study concluded that even the 2017 study estimates were an underestimate, particularly in relation to humpback whale

[48] Saez, Lauren, et al. "Understanding the co-occurrence of large whales and commercial fixed gear fisheries off the west coast of the United States." NOAA Tech Memo, NOAA-TM-NMFS-SWR-044 (2013).
[49] *Id*. at 74, Table 7.
[50] *See id.* at 98.
[51] Feist, Blake Edward. "Potential overlap between cetaceans and commercial groundfish fleets that operate in the California Current Large Marine Ecosystem," NOAA Professional Paper NMFS 17 (2015).
[52] *Id.*at 1.
[53] Rockwood RC, Calambokidis J, Jahncke J. "High mortality of blue, humpback and fin whales from modeling of vessel collisions on the U.S. West Coast suggests population impacts and insufficient protection." PLoS ONE 12(8): e0183052 (2017).
[54] *Id.*
[55] *Id.*

mortality during winter months.[56] Because ship strikes of humpback whales cause serious injury and mortality that exceeds PBR, the Biological Opinion's failure to consider could materially affect the outcome of the jeopardy analysis and thus makes the consultation unlawful.

In short, the Biological Opinion is legally flawed and does not ensure against the likelihood of jeopardy of ESA-listed humpback whales from operation of the Fishery or ensure the Fishery will not destroy or adversely modify their designated critical habitat. By relying on the Biological Opinion to support the continued permitting, authorization, and management of the Fishery, NMFS is failing to ensure its actions will avoid the likelihood of jeopardy to ESA-listed humpback whales and is failing to ensure its actions will not destroy or adversely modify their critical habitat. Thus, NMFS has violated, and continues to violate, section 7(a)(2) of the ESA.[57]

IV. NMFS Must Reinitiate Consultation Based on Information Revealing New Fishery Effects On Humpback Whales and Critical Habitat.

A. Entanglement Risk Assessments Show the Increasing Likelihood of Fishery Interactions with Humpback Whales.

While vertical lines in the water are always a threat for whales, research published since the Biological Opinion showed that changing environmental conditions and whale migrations have increased the time in which humpback whales are at risk of entanglement off the Gulf of the Farallones.[58] Based on these models, climate change is likely to continue to exacerbate the risk of whale entanglement on the West Coast.[59] It is therefore important for NMFS to reinitiate consultation to assess accurately future entanglement risk and include terms and conditions to mitigate the risk.

Harmful algal blooms, for example, can delay the start of the Dungeness crab season, as occurred in spring 2016. During the closures fishing effort shifted from the Dungeness crab fleet to other fisheries, including sablefish pots.[60] Since 2016, the California Dungeness crab fishery has implemented a risk assessment program that includes delayed starts when entanglement risk is high. Spillover of fishing effort to the sablefish pots during these closures could increase the risk of entanglements in sablefish pots.

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[56] C. Rockwood and Jahncke, J. "Management recommendations to reduce deadly whale strikes off California." Report for the National Oceanic Atmospheric Administration, the United States Coast Guard, and the Maritime Industry (2019).
[57] 16 U.S.C. § 1536(a)(2).
[58] Ingman, Kaytlin, et al. "Modeling changes in baleen whale seasonal abundance, timing of migration, and environmental variables to explain the sudden rise in entanglements in California." *Plos one* 16.4 (2021): e0248557.
[59] *Id.*
[60] Fisher, Mary C., et al. "Climate shock effects and mediation in fisheries." *Proceedings of the National Academy of Sciences* 118.2 (2021), https://repository.library.noaa.gov/view/noaa/30641/noaa_30641_DS1.pdf.

NMFS scientists studying the uptick in humpback whale entanglements beginning in 2014 concluded it was due primarily to large whales moving closer in proximity to long-standing fisheries footprints. [61] The study used data showing the contemporaneous overlap between fishing activity and entanglement sightings.[62] For the pot-and trap-based sablefish fishery most of the overlap in high humpback whale density regions occurred off California.[63] These studies provide valuable information about the potential Fishery interactions with humpback whales and how to minimize humpback whale take that the Biological Opinion must consider.

B. The Final Rule For Humpback Critical Habitat Underscores the Importance of Dwindling Prey Items.

Since publication of the Biological Opinion, NMFS has published the final humpback whale critical habitat rule that added specific examples to the descriptions of the prey feature for each DPS.[64] These are:

> [For the Central America] DPS: Prey species, primarily euphausiids (Thysanoessa, Euphausia, Nyctiphanes, and Nematoscelis) and small pelagic schooling fishes, such as Pacific sardine (Sardinops sagax), northern anchovy (Engraulis mordax), and Pacific herring (Clupea pallasii), of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.
>
> [For the Mexico] DPS: Prey species, primarily euphausiids (*Thysanoessa, Euphausia, Nyctiphanes,* and *Nematoscelis*) and small pelagic schooling fishes, such as Pacific sardine (*Sardinops sagax*), northern anchovy (*Engraulis mordax*), Pacific herring (*Clupea pallasii*), capelin (*Mallotus villosus*), juvenile walleye pollock (*Gadus chalcogrammus*), and Pacific sand lance (*Ammodytes personatus*) of sufficient quality, abundance, and accessibility within humpback whale feeding areas to support feeding and population growth.[65]

The prey items necessary for the conservation of each species differ in part because the two DPSs have different but overlapping foraging grounds.

Unfortunately, some of the DPS's shared prey items – Pacific sardine and northern anchovy – have new information about low or declining abundances that suggests that harvest, even if small, may affect humpback whale critical habitat to a degree not considered in the Biological Opinion. For Pacific sardine, for example, NMFS made a projection in the spring of 2021 that biomass would be just 14,011 mt in July 2021, after an order-of-magnitude decline

[61] Feist, Blake E., et al. "Footprints of fixed-gear fisheries in relation to rising whale entanglements on the US West Coast." *Fisheries Management and Ecology* 28.3: 283-294 (2021).
[62] *Id.*
[63] *Id.*
[64] *Endangered and Threatened Wildlife and Plants: Designating Critical Habitat for the Central America, Mexico, and Western North Pacific Distinct Population Segments of Humpback Whales,* 86 Fed Reg. 21082, 21084.
[65] *Id.*

over 15 years.[66] This is consistent with recent science that shows that marine heatwaves caused both sardine and anchovy biomass to decrease despite science that once predicted that sardine biomass would increase with warmer temperatures resulting from decadal-scale changes.[67] At low abundances, even small harvest could further stress humpback whales that are trying to find large quantities of food.[68]

NMFS must therefore reinitiate consultation on the impacts of the Fishery on ESA-listed humpback whales. NMFS's failure to do so violates the agency's procedural and substantive duties under section 7(a)(2) of the ESA.[69]

V. Conclusion

The ESA violations contained herein warrant a rapid remedy. Specifically, we request an emergency regulation to remain in place until NMFS has published a biological opinion that includes an incidental take statement for humpback whales. The proposed emergency rule would close the Fishery in all humpback whale critical habitat unless ropeless fishing gear is used.

Please contact me with any questions or to discuss this letter.

Sincerely,

/s/ *Catherine W. Kilduff*

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[66] Peter T. Kuriyama et al., "Assessment of the Pacific Sardine Resources in 2020 for U.S. Management in 2020–2021" at xi (May 2020); Peter T. Kuriyama et al., "Catch-only projection of the Pacific sardine resource in 2021 for U.S. management in 2021-2022" (April 2021), https://www.pcouncil.org/documents/2021/03/e-4-attachment-1-catch-only-projection-estimate.pdf/

[67] Cheung, William WL, and Thomas L. Frölicher. "Marine heatwaves exacerbate climate change impacts for fisheries in the northeast Pacific." *Scientific reports* 10.1: 1-10 (2020) ("warm regimes tend to favor sardine's recruitment and abundance while cool regimes favor anchovy. Thus, under decade-scale mean ocean warming, sardine was projected to increase in biomass while the opposite was projected for anchovy in the California Current. In contrast, poleward range expansion of sardine and anchovy was projected to result in long-term increase in their abundance in the Gulf of Alaska. However, the projected short-term rapid warming under MHWs pushed environmental temperature beyond those preferred by both sardine and anchovy, leading to a drop in their biomasses in both the California Current and Gulf of Alaska.")

[68] *See also Oceana v. Ross,* Case No. Case 5:19-cv-03809, "Order Regarding Motions For Summary Judgment," Dkt. 77 (N.D. Cal., Sept. 2, 2020). ("NMFS was required to consider the substantial evidence in the record indicating that fishing could exacerbate population fluctuations and declines, even if the [anchovy] population fluctuations were largely driven by environmental factors.").

[69] 16 U.S.C. § 1536(a)(2).