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Wilbur Ross, Secretary of Commerce  
U.S. Department of Commerce  
1401 Constitution Ave, N.W.  
Washington, D.C. 20230  
WLRoss@doc.gov

Chad F. Wolf, Acting Secretary  
Department of Homeland Security  
245 Murray Lane, S.W.  
Washington, D.C. 20528  
chad.wolf@hq.dhs.gov

Donna Wieting, Director  
Office of Protected Resources  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring, MD 20910-3225  
donna.wieting@noaa.gov

Admiral Karl L. Schultz, Commandant  
U.S. Coast Guard Stop 7710  
2703 Martin Luther King Jr. Ave, S.E.  
Washington, D.C. 20593-7710  
Karl.L.Schultz@uscg.mil

Barry Thom, Regional Administrator  
National Marine Fisheries Service  
West Coast Regional Office  
1201 Northeast Lloyd  
Portland, OR 97232  
barry.thom@noaa.gov

*Sent via electronic and certified mail*

**RE: Sixty-day Notice of Intent to Sue for Violations of Endangered Species Act Related to February 23, 2017 Section 7 Biological Opinion for the Regulatory Codification of Traffic Separation Schemes Near the Ports of Los Angeles/Long Beach and San Francisco/Oakland**

Dear Secretary Ross, Director Wieting, Regional Administrator Thom, Acting Secretary Wolf, and Commandant Schultz:

On behalf of the Center for Biological Diversity (“Center”), this letter provides the National Marine Fisheries Service (“NMFS”) (also known as NOAA Fisheries) and U.S. Coast Guard (“USCG”) with Notice, pursuant to section 11(g) of the Endangered Species Act (“ESA”), that the Center intends to sue the agencies for not meeting their obligations under section 7 of the ESA in relation to the February 23, 2017 Biological Opinion for the regulatory codification of Traffic Separation Schemes (“TSS”) for the approaches to the Los Angeles/Long Beach and San Francisco Bay region ports.

Vessel ship strikes are the *number one* killer of blue and fin whales off the California coast, and the second largest mortality source for humpback whales. Leading whale researchers estimate that every observed ship strike mortality of a blue whale, fin whale, or humpback whale represents *at least* ten unobserved and undetected whale deaths, because these great creatures

typically sink to the bottom of the ocean after being struck. Leatherback sea turtles killed by ship strikes are even less likely to be observed.

The estimated levels of whale mortality from ship strikes far exceed the quantified thresholds of “potential biological removal” established by NMFS under federal law. When marine mammals are being killed at rates above these levels, those deaths are likely having population level impacts. In other words, ship strikes off the California coast are significantly impeding the recovery trajectory of great whales. Although there is much to celebrate in the population gains these species have achieved after being pushed to the brink of extinction by industrial whaling during much of the twentieth century, their recovery is far from complete and remains tenuous.

Although the 2017 Biological Opinion is lengthy, NMFS never directly acknowledges or meaningfully analyzes the existing and ongoing impact of USCG shipping lane decisions on populations of whales and leatherback sea turtles off the California coast. NMFS also ignores its own past decisions to reject vessel speed reduction measures that would significantly reduce whale mortality, and omits meaningful discussion of other existing impacts on the species, including the significant mortality of humpback whales and leatherback sea turtles from various fisheries. And NMFS does not carefully examine the trend in shipping towards larger and faster vessels that will be even more deadly to whales and sea turtles.

By failing to carefully consider these existing baseline conditions, NMFS masks the impacts of the USCG shipping lane decisions considered in the 2017 Biological Opinion. Although these decisions included some positive incremental changes—including a shift in the Santa Barbara Channel TSS away from a whale feeding “hotspot”—the USCG routing decisions continue to concentrate large vessel traffic through areas of high whale densities.

These routing decisions are the proximate cause for ship strikes that kill, wound, and otherwise “take” these animals in violation of section 9 of the ESA. Every unauthorized strike of an ESA-protected whale or sea turtle is prohibited under the ESA. Yet the 2017 Biological Opinion provides none of the required lawful measures to quantify, track, and minimize such take, leaving these animals even more vulnerable to injuries and deaths from ship strikes.

The ultimate purpose of the Endangered Species Act section 7 consultation process is to prohibit federal agencies from taking actions that jeopardize the continued existence of endangered species or adversely modify their critical habitat. When NMFS does conclude an action is likely to cause jeopardy, it must work with the action agency (in this case, USCG) to develop reasonable alternatives that will avoid jeopardy.

Due to the fundamental deficiencies in the 2017 Biological Opinion described above, NMFS’ “no jeopardy” determination is unsupportable and unlawful. As a consequence, the agencies failed to consider alternatives that would reduce whale and leatherback sea turtle mortality levels, despite the fact that the best available scientific data conclusively demonstrates that existing take numbers greatly exceed sustainable levels.

There are two main categories of operational measures that are proven to reduce ship strikes: (1) routing changes that reduce the overlap of shipping traffic with areas of high whale densities; and (2) mandatory and enforced vessel speed restrictions. In the context of the 2017 Biological Opinion, unexamined alternatives include seasonal prohibitions on large vessel traffic within the Santa Barbara Channel and one or more approaches to San Francisco region ports, creation of new or expanded Areas to be Avoided, and other routing measures within USCG or NMFS jurisdiction, including mandatory and enforceable vessel speed reductions within the shipping lane approaches and other vessel transit areas.

Even if NMFS had produced a lawful Biological Opinion in 2017, the ESA requires a “reinitiation” of the previously completed consultation in light of significant new information produced since that time. This new information strongly reinforces previous evidence demonstrating that: (1) whale mortality from ship strikes is many factors greater than observed mortality; (2) this mortality is negatively impacting whale recovery; (3) non-regulatory approaches to reducing ship speeds, including voluntary measures and incentive programs, are ineffectual; and (4) in order to protect whales and leatherback sea turtles, shipping lane modifications and enforceable regulatory speed limits are needed not only in TSS approaches, but other vessel transit areas along the California coast.

## **I. Legal Background**

### **A. *Endangered Species Act***

The ESA is “the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.”<sup>1</sup> Its fundamental purposes are “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved [and] to provide a program for the conservation of such endangered species and threatened species . . . .”<sup>2</sup>

To achieve these objectives, the ESA directs the Secretary of Commerce, through NMFS, to determine whether imperiled marine species are “threatened” and “endangered” and place them on the list of protected species.<sup>3</sup> An “endangered” or “threatened” species is one “in danger of extinction throughout all or a significant portion of its range,” or “likely to become endangered in the near future throughout all or a significant portion of its range,” respectively.<sup>4</sup>

Once a species is listed, the ESA provides a variety of procedural and substantive protections to ensure not only the species’ continued survival, but its ultimate recovery, including the designation of critical habitat, the preparation and implementation of recovery plans, the prohibition against the taking of listed species, and the requirement for interagency

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<sup>1</sup> 16 U.S.C. §§ 1531-1544; *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978).

<sup>2</sup> 16 U.S.C. § 1531(b).

<sup>3</sup> *Id.* § 1533.

<sup>4</sup> *Id.* § 1532(6), (20).

consultation.<sup>5</sup> 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.”<sup>6</sup> The ESA provides two statutory exemptions to the take prohibition if it is determined that the action does not jeopardize the survival of the species. Under section 10, private parties may apply for and obtain permits under a detailed procedure that includes preparation of a habitat conservation plan (“HCP”).<sup>7</sup> The second is provided through the section 7 consultation process, under which NMFS issues an “incidental take statement.”<sup>8</sup>

The section 7 consultation process has been described as the “heart of the ESA.”<sup>9</sup> During consultation, federal agencies must “use the best scientific and commercial data available.”<sup>10</sup> Substantively, section 7(a)(2) prohibits agency actions that: (1) jeopardize the continued existence of listed species; or (2) destroy or adversely modify their designated critical habitat.<sup>11</sup>

In a “formal” section 7 consultation, the consulting branch of NMFS prepares a “biological opinion” as to whether the action is likely to jeopardize the species or destroy or adversely modify critical habitat and, if so, suggests “reasonable and prudent alternatives” to avoid that result.<sup>12</sup> ESA regulations define “[j]eopardize the continued existence of” as “to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.”<sup>13</sup>

A jeopardy analysis requires NMFS to consider the “environmental baseline” in determining the effects of the agency action. The environmental baseline “includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation process.”<sup>14</sup> In addition, “ongoing agency activities or existing agency facilities that are not within the agency’s discretion to modify are part of the environmental baseline.”<sup>15</sup> NMFS must assess all of these factors in context of the

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<sup>5</sup> *Id.* §§ 1533(a)(3), 1533(f), 1536, 1538.

<sup>6</sup> *Id.* § 1532(19).

<sup>7</sup> *Id.* § 1539.

<sup>8</sup> *Id.* § 1536.

<sup>9</sup> *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 495 (9th Cir. 2011).

<sup>10</sup> 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(d).

<sup>11</sup> NMFS’ regulations (joint regulations prepared with U.S. Fish and Wildlife Service, which is responsible for administering the Act with respect to imperiled terrestrial species) define an agency “action” to mean “all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies.” 50 C.F.R. § 402.02.

<sup>12</sup> *Id.* § 402.14(g)(5), (g)(8); 16 U.S.C. § 1536(b)(3)(A).

<sup>13</sup> 50 C.F.R. § 402.02.

<sup>14</sup> *Id.*

<sup>15</sup> *Id.*

current status of the species and its habitat.<sup>16</sup> NMFS may only issue a non-jeopardy opinion where it considers all of these elements and concludes that the aggregate impact does not threaten a species' survival and recovery.<sup>17</sup>

If the biological opinion concludes that the action is not likely to jeopardize the continued existence of a listed species, and will not result in the destruction or adverse modification of critical habitat, NMFS must provide an "incidental take statement," specifying the amount or extent of such incidental taking on the species and any "reasonable and prudent measures" that NMFS considers necessary or appropriate to minimize such impact, and setting forth the "terms and conditions" that must be complied with by the action agency to implement those measures.<sup>18</sup>

The action and consulting agencies' ESA duties do not end with the completion of the initial consultation. Agencies must reinitiate consultation on agency actions over which the action agency retains, or is authorized to exercise, discretionary involvement or control, if: (a) the amount or extent of taking specified in the incidental take statement is exceeded; (b) 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; (c) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or (d) a new species is listed or critical habitat designated that may be affected by the identified action.<sup>19</sup> After the initiation or reinitiation of section 7 consultation, the action agency is prohibited from making any irreversible or irretrievable commitment of resources with respect to the agency action.<sup>20</sup>

## ***B. Ports and Waterways Safety Act***

The USCG agency actions to change the shipping lanes for the approaches to, and departures from, the Los Angeles/Long Beach ports and San Francisco Bay region ports (including San Francisco, Oakland, and Richmond) were made pursuant to the Ports and Waterways Safety Act ("PWSA").<sup>21</sup> Congress passed the PWSA in 1967 in reaction to the grounding of the oil supertanker *Torrey Canyon* in the English Channel. The wreck of the *Torrey Canyon* "had a catastrophic impact on the environment," and "brought to the world's attention,

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<sup>16</sup> *Id.* § 402.14(g)(4) ("Add the effects of the action and cumulative effects to the environmental baseline and in light of the status of the species and critical habitat, formulate the Service's opinion as to whether the action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.").

<sup>17</sup> *Am. Rivers & Ala. Rivers Alliance v. FERC*, 895 F.3d 32, 47 (D.C. Cir. 2018) ("attributing ongoing project impacts to the 'baseline' and excluding those impacts from the jeopardy analysis does not provide an adequate jeopardy analysis.").

<sup>18</sup> 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(i).

<sup>19</sup> 50 C.F.R. § 402.16(a)(1)-(4).

<sup>20</sup> 16 U.S.C. § 1536(d).

<sup>21</sup> The PWSA was recently recodified and amended under Subtitle VII of title 46 pursuant to the Frank Lobiondo Coast Guard Authorization Act of 2018, 115 P.L. 282; 132 Stat. 4192 (enacted Dec. 4, 2018) (moving the PWSA from title 33, chapter 25 (33 U.S.C. §§ 1221-1236) to 46 U.S.C. §§ 70001-70036).

essentially for the first time, the enormous sizes to which tankers had evolved, and the potential for their cargoes for damaging the marine environment.”<sup>22</sup>

Accordingly, the PWSA emphasizes protection of “marine environment” from its first provision.<sup>23</sup> The PWSA expansively defines “marine environment” to include “the navigable waters of the United States and the land and resources within and under those waters,” fishery resources, “and the recreational, economic, and scenic values of such waters and resources.”<sup>24</sup>

The PWSA directs USCG to “provide safe access routes” for large vessels through the establishment of traffic separation schemes (“TSS”).<sup>25</sup> Like lanes on a paved road, TSSs are “aimed at the separation of opposing streams of traffic.”<sup>26</sup> Before establishing the TSS, the PWSA requires that USCG “undertake a study of the potential traffic density and need for safe access routes.”<sup>27</sup> The PWSA mandates that this “port access route study” (“PARS”) consider nine specific factors, including environmental, and requires that USCG “consult with and receive and consider the views” of various stakeholders, including “representatives of environmental groups.”<sup>28</sup> The PWSA also provides USCG with the general authority to “establish[] vessel size, speed, or draft limitations and vessel operating conditions” when necessary to address “hazardous circumstances.”<sup>29</sup>

## II. Factual Background

### A. *Great Whales Off the U.S. West Coast*

All large baleen whale species, including blues, fins, and humpbacks, were hunted to the brink of extinction during the nineteenth and twentieth centuries. It is estimated, for example, that 380,000 blue whales were killed by whalers in the twentieth century—largely for the manufacture of soap and margarine—resulting in extirpation of some populations and reduction of others by more than 99 percent.<sup>30</sup> Scientists posit that the ocean endured a multispecies, megafaunal collapse as a result of the reduction of great whales by post-WWII industrial whaling.<sup>31</sup> The rapid removal of large quantities of whales that formerly consumed half of the

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<sup>22</sup> Jeffrey A. Weiss, *Maritime disasters through the ages*, 32 J. Mar. L. & Com. 215, 234 (April 2001).

<sup>23</sup> 46 U.S.C. § 70001.

<sup>24</sup> *Id.* § 70031(1)(A)-(D).

<sup>25</sup> *Id.* § 70003(a).

<sup>26</sup> 33 C.F.R. § 167.5(b).

<sup>27</sup> 46 U.S.C. § 70003 (c)(1)(A).

<sup>28</sup> *Id.* § 70004 (1)-(A)-(I).

<sup>29</sup> *Id.* § 70001(a)(4)(C).

<sup>30</sup> See Dan Bortolotti, *WILD BLUE: A NATURAL HISTORY OF THE WORLD’S LARGEST ANIMAL* 12-13, 34 (2008).

<sup>31</sup> Springer, A.M., Estes, J.A., Van Vliet, G.B., Williams, T.M., Doak, D.F., Danner, E.M. and Pfister, B., 2008. Mammal-eating killer whales, industrial whaling, and the sequential megafaunal collapse in the North Pacific Ocean: A reply to critics of Springer et al. 2003. *Marine Mammal Science*, 24(2), pp.414-442.

primary production in the ocean had cascading and detrimental ecosystem effects that continue today.<sup>32</sup>

The International Whaling Commission prohibited hunting of these large baleen whales in 1966, and subsequently enacted a moratorium on commercial hunting of all whale species that became effective in 1985.<sup>33</sup> Domestically, blues, fins, and humpbacks have been listed as endangered since prior to the 1973 enactment of the ESA, though NMFS has not yet designated critical habitat for any of the three species. Although these whale species have shown signs of recovery, all remain vulnerable to population level impacts.

The blue whale, which remains a single listed entity despite the presence of five currently recognized subspecies, has an estimated global population abundance of 10,000-25,000 whales or approximately 3-11% of its population in the early twentieth century.<sup>34</sup> Blue whales off the California coast are managed by NMFS under the Marine Mammal Protection Act (“MMPA”) as part of the Eastern North Pacific stock.<sup>35</sup> Abundance estimates of this stock based on photographic mark-recapture data from 2005-2011 range from approximately 1,000 to 2,300 whales.<sup>36</sup> The current potential biological removal (“PBR”) level for the Eastern Northern Pacific stock of blue whales within U.S. waters is 2.3 whales per year.<sup>37</sup>

Like blue whales, fin whales are a cosmopolitan species widely distributed throughout the world’s oceans. Fin whales are less well studied and their population dynamics and trends are less well known than both blue whales and humpback whales. The pre-whaling population of fin whales in the North Pacific is estimated to be 42,000-45,000 animals, and the most recent minimum population estimate for the California/Oregon/Washington stock is 8,127 whales.<sup>38</sup>

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<sup>32</sup> Croll, D.A., Kudela, R. and Tershy, B.R. 2006. Ecosystem impact of the decline of large whales in the North Pacific. *Whales, whaling and ocean ecosystems*, 200-212; Roman, J. and J. J. McCarthy. 2010. The Whale Pump: Marine Mammals Enhance Primary Productivity in a Coastal Basin. *PLoS ONE*. 5 (10): e13255 DOI: 10.1371/journal.pone.0013255

<sup>33</sup> *See Japan Whaling Ass’n v. Am. Cetacean Soc’y*, 478 U.S. 221 (1986).

<sup>34</sup> Draft Recovery Plan for the Blue Whale (October 2018), at p. 1.

<sup>35</sup> NMFS guidelines define “stock” under the MMPA as a “demographically independent biological population” where internal dynamics (births and deaths) have a larger impact on population dynamics than external dynamics (immigration and emigration). NMFS, 2016. Guidelines for Preparing Stock Assessment Reports Pursuant to the 1994 Amendments to the MMPA. NMFS Instruction 02-204-01, February 22, 2016.

<sup>36</sup> Calambokidis, J. and J. Barlow. 2013. Updated abundance estimates of blue and humpback whales of the U.S. West Coast incorporating photo-identifications from 2010 and 2011. Document PSRG-2013-13 presented to the Pacific Scientific Review Group, April 2013.

<sup>37</sup> NOAA Technical Memorandum: U.S. Pacific Marine Mammal Stock Assessments: 2018 (June 2019), at p. 185. The PBR level is an estimate of the number of individuals that can be taken as a result of human activities while still allowing the stock to recover or remain within the envelope of its optimum sustainable population size.

<sup>38</sup> NOAA Technical Memorandum: U.S. Pacific Marine Mammal Stock Assessments: 2018 (June 2019), at p. 192.

Fin whale populations off the U.S. West Coast are believed to have increased 5-fold from 1991-2014, although since 2005, population numbers off the central and southern California coast do not exhibit a significant trend. Moreover, the Southern California Bight “appears to represent the southernmost extent of [fin whale] summer range and northernmost extent of the winter range of the [California current system] population,” and fin whales in the Bight may be “a resident subpopulation [which] remains year-round.”<sup>39</sup> The current PBR for the California/Oregon/Washington stock of fin whales is 81 whales per year.<sup>40</sup>

Humpback whales are the only member of the three large whale species for which NMFS has revised the ESA listing,<sup>41</sup> and the only member for which NMFS has proposed designating critical habitat.<sup>42</sup> Industrial whaling reduced the north Pacific humpback population to only 1,200 animals in 1966.<sup>43</sup> These population estimates have increased to approximately 20,000 whales in 2006.<sup>44</sup>

Humpback whales along the U.S. West Coast are recognized as a single stock for MMPA purposes, which includes two feeding groups: (1) a California and Oregon feeding group and (2) a northern Washington and southern British Columbia feeding group.<sup>45</sup> The former includes whales from the endangered Central America DPS, which feeds almost exclusively off California and Oregon, and the threatened Mexico DPS, which feeds off Washington and British Columbia as well.<sup>46</sup> The Central America DPS abundance estimate is 411 whales.<sup>47</sup> The current PBR for this stock in U.S. waters is 16.7 whales per year.<sup>48</sup>

### ***B. Ship Strike Impacts to Blue Whales, Fin Whales, and Humpback Whales Off the U.S. West Coast***

Ship strikes have been recognized as a primary threat to the recovery of blue whales, fin whales, and humpback whales for decades.<sup>49</sup> Today, ship strike mortality is “thought to be the

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<sup>39</sup> Scales, K.L., G.S. Schorr, E.L. Hanzen, S.J. Bograd, P.I. Miller, R.D. Andrews, A.N. Zerbini, E.A. Falcone. 2017. Should I stay or should I go? Modelling year-round habitat suitability and drivers of residency for fin whales in the California Current. *Diversity Distrib.* 23:1204-1215.

<sup>40</sup> NOAA Technical Memorandum: U.S. Pacific Marine Mammal Stock Assessments: 2018 (June 2019), at p. 193.

<sup>41</sup> 81 Fed. Reg. 62,260 (Sept. 8, 2016) (Identification of 14 Distinct Population Segments and Revision of Species-Wide Listing).

<sup>42</sup> 84 Fed. Reg. 54,354 (Oct. 9, 2019) Proposed Rule To Designate Critical Habitat for the Central America, Mexico, and Western North Pacific Distinct Population Segments of Humpback Whales.

<sup>43</sup> NOAA Technical Memorandum: U.S. Pacific Marine Mammal Stock Assessments: 2018 (June 2019), at p. 174.

<sup>44</sup> *Id.*

<sup>45</sup> *Id.* at p. 173.

<sup>46</sup> *Id.*

<sup>47</sup> *Id.* at 174.

<sup>48</sup> This PBR level is excessively high and not supported by the best available scientific data.

<sup>49</sup> See, e.g., Aleria S. Jensen & Gregory K. Silber, U.S. Department of Commerce, Large Whale Ship Strike Database: NOAA Technical Memorandum NMFS-OPR-25 (2004)(documenting 292 confirmed or



number one killer of blue and fin whales and the second greatest cause of death for humpback whales along the U.S. West Coast.”<sup>50</sup> Ship strikes are rarely witnessed, however, and the carcasses of most whales killed by collisions sink before “stranding” or washing up on a beach. Accordingly, the number of actual ship strikes is likely vastly underestimated; as stated by a leading blue whale researcher, “[t]rue mortality could be ten times (or more) higher than suggested by the documented strandings.”<sup>51</sup>

According to NMFS data, there were 20 whales killed by ships within the Gulf of Farallones and Cordell Bank National Marine Sanctuaries region from 1988-2011.<sup>52</sup> In addition, there have been periodic “pulses” of observed strandings from ship strike collisions, in 1998, 2002, and September 2007, when there were five sightings of dead blue whales in a 12-day period in southern California.<sup>53</sup> Historically high numbers of blue whales were documented in the Santa Barbara Channel immediately prior to this cluster of observable ship strike mortalities, leading to heightened recognition that recovering whale populations would be increasingly susceptible to ship strike events and mortality in the absence of corrective action.<sup>54</sup> In 2013, researchers made specific estimates of blue whale ship strike mortality within the Santa Barbara Channel showing that such mortality—in one portion of the coast and arising from one activity—greatly exceeded PBR levels for blue whales.<sup>55</sup>

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possible ship strikes in North American waters between 1975-2002); Randall R. Reeves et al., National Marine Fisheries Service, Recovery Plan for the Blue Whale (*Balaenoptera Musculus*) (1998) (identifying ship strikes as a primary threat to the species and directing NMFS to identify and implement measures to reduce such strikes).

<sup>50</sup> Rockwood RC, Calambokidis J, Jahncke J. 2017. 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.

<sup>51</sup> See “Blue Whale Ship Strikes,” available at: <http://www.cascadiaresearch.org/projects/blue-whale-ship-strikes>; NOAA Technical Memorandum: U.S. Pacific Marine Mammal Stock Assessments: 2018 (June 2019), at p. 178. Other scientific literature suggests the actual level of mortality could be as much as *fifty times* observed levels. See Kraus, SD, et al. 2005. North Atlantic right whales in crisis. *Science* 309:561-562; Williams, R., S. Gero, L. Bejder, J. Calambokidis, S.D. Kraus, D. Lusseau, A.J. Rad, and J. Robbins. 2011. Understanding the damage: interpreting cetacean carcass recoveries in the context of the Deepwater Horizon/BP incident. *Conservation Letters* 4(3):228-233.

<sup>52</sup> Protecting Whales from Vessel Strikes and Acoustic Impacts. Available at: <https://farallones.noaa.gov/eco/vesselstrikes/>.

<sup>53</sup> Berman-Kowalewski, M., F.M.D. Gulland, S. Wilkin, J. Calambokidis, B. Mate, J. Cordaro, D. Rotstein, J. St Leger, P. Collins, K. Fahy, and S. Dover. 2010. Association between blue whale mortality and ship strikes along the California coast. *Aquatic Mammals* 36(1): 59-66.

<sup>54</sup> *Id.*

<sup>55</sup> Redfern, J.V., M.F. McKenna, T.J. Moore, J. Calambokidis, M.L. Deangelis, E.A. Becker, J. Barlow, K.A. Forney, P.C. Fiedler, S.J. Chivers. 2013. Assessing the risk of ships striking large whales in marine spatial planning. *Conservation Biology* 27:292-302.

### C. *Leatherback Sea Turtles Off the U.S. West Coast*

Leatherback sea turtles in California undertake a lengthy migration from nesting grounds in the South China Sea to exploit temperate foraging habitats off central California.<sup>56</sup> These “West Pacific” leatherbacks embark on their trans-Pacific migrations to forage on the seasonally abundant West Coast jellyfish aggregations.<sup>57</sup> NMFS designated critical habitat along the U.S. West Coast in 2012, which includes waters off California with sufficient condition, distribution, diversity, abundance and density of prey species (*i.e.*, jellyfish) necessary to support growth, reproduction, and development of leatherbacks.<sup>58</sup> This illustrates the importance of waters off California for leatherback foraging success, and the need to conserve those waters.

Though the leatherback sea turtle has been federally protected under the Endangered Species Act since 1970,<sup>59</sup> it is still one of the marine animals most at-risk of extinction in the United States. Population declines have been documented at nesting beaches throughout the Indo-Pacific region.<sup>60</sup> The total West Pacific leatherback population was estimated in 2007 to include 2,700-4,500 breeding females with 1,100-1,800 female leatherbacks nesting annually.<sup>61</sup> More recently, deriving abundance estimates from nest counts, NMFS conservatively estimated

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<sup>56</sup> Benson SR et al. 2011. Large-scale movements and high-use areas of western Pacific leatherback turtles, *Dermochelys coriacea*. *Ecosphere* 2:art84; Lontoh, D.N. 2014. Thesis: Variation in tissue stable isotopes, body size, and reproduction of western Pacific leatherback turtles. San José State University, available at [http://islandora.mlml.calstate.edu/islandora/object/islandora%3A2279/datastream/OBJ/download/Variation\\_in\\_tissue\\_stable\\_isotopes\\_body\\_size\\_and\\_reproduction\\_of\\_western\\_Pacific\\_leatherback\\_turtles.pdf](http://islandora.mlml.calstate.edu/islandora/object/islandora%3A2279/datastream/OBJ/download/Variation_in_tissue_stable_isotopes_body_size_and_reproduction_of_western_Pacific_leatherback_turtles.pdf).

<sup>57</sup> Benson SR, Forney KA, Harvey JT, Carretta JV, Dutton PH. 2007. Abundance, distribution, and habitat of leatherback turtles (*Dermochelys coriacea*) off California, 1990–2003. *Fishery Bulletin* 105:337–347, p. 345; Block BA et al. 2011. Tracking apex marine predator movements in a dynamic ocean. *Nature* 475:86–90, p. 87; Bailey H, Benson SR, Shillinger GL, Bograd SJ, Dutton PH, Eckert SA, Morreale SJ, Paladino FV, Eguchi T, Foley DG. 2012. Identification of distinct movement patterns in Pacific leatherback turtle populations influenced by ocean conditions. *Ecological Applications* 22:735–747, p. 739.

<sup>58</sup> 77 Fed. Reg. 4,170 (Jan. 26, 2012) (Final Rule To Revise the Critical Habitat Designation for the Endangered Leatherback Sea Turtle).

<sup>59</sup> 35 Fed. Reg. 8,491 (June 2, 1970). Conservation of Endangered Species and Other Fish or Wildlife.

<sup>60</sup> Chan EH, Liew HC. 1996. Decline of the leatherback population in Terengganu, Malaysia, 1956-1995. *Chelonian Conservation and Biology* 2:196–203; Spotila JR, Reina RD, Steyermark AC, Plotkin PT, Paladino FV. 2000. Pacific leatherback turtles face extinction. *Nature* 405:529; Hitipeuw, C., Dutton, P.H., Benson, S., Thebu, J. and Bakarbesy, J. 2007. Population status and interesting movement of leatherback turtles, *Dermochelys coriacea*, nesting on the northwest coast of Papua, Indonesia. *Chelonian Conservation and Biology*, 6(1), pp.28-36; NMFS, USFWS. 2013. Leatherback sea turtle (*Dermochelys coriacea*) 5-year review: Summary and evaluation. National Marine Fisheries Service, Office of Protected Resources and U.S. Fish and Wildlife Service Southeast Region, Silver Spring, Maryland and Jacksonville, Florida.

<sup>61</sup> Dutton PH, Hitipeuw C, Zein M, Benson SR, Petro G, Pita J, Rei V, Ambio L, Bakarbesy J. 2007. Status and Genetic Structure of Nesting Populations of Leatherback Turtles (*Dermochelys coriacea*) in the Western Pacific. *Chelonian Conservation and Biology* 6:47–53, p. 47, 51.

that the West Pacific population includes 562 nesting females.<sup>62</sup> There are expected to be half that amount by 2040, which is too small a population to recover.<sup>63</sup>

The number of Pacific leatherback sea turtles in California waters has declined consistently with the decline observed in the Pacific population. NMFS scientists estimated an annual average of 178 leatherback sea turtles were off the California coast between 1990 and 2003.<sup>64</sup> In 2015, a NMFS scientist estimated the average number of Pacific leatherbacks in California waters from 2005-2014 to be 54 individuals annually.<sup>65</sup>

#### ***D. Ship Strike Impacts to Leatherback Sea Turtles Off the U.S. West Coast***

Stranding records provide only a minimum of information about the magnitude of the threat of vessel strikes to leatherback sea turtles. As noted in the 2017 Biological Opinion, from 1989 through 2014 there have been 12 reported incidents of vessel-struck leatherback sea turtles in California. According to NMFS scientists, mortality of leatherbacks on the U.S. West Coast must be kept to less than one every six years to avoid delaying the population's rebuilding.<sup>66</sup>

Observations of turtles struck by vessels underestimate the actual impact because carcasses that sink or strand in an area where they cannot be detected go unreported or unobserved.<sup>67</sup> The 2017 Biological Opinion noted that it is:

[I]mpossible to know how many leatherbacks have been affected by ship strikes because it is likely that animals are not seen or their bodies are destroyed as a result of either blunt force trauma or getting caught in a ship's propellers. Large whales, due to their size, are much more likely to be seen after an interaction with a ship; leatherbacks average six feet in length while the large whales . . . may range in size from 40 to 90 feet in length.<sup>68</sup>

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<sup>62</sup> NMFS. 2017. Biological and Conference Opinion on the Proposed Implementation of a Program for the Issuance of Permits for Research and Enhancement Activities on Threatened and Endangered Sea Turtles. FPR-2017-9230, Dec. 21, 2017, p. 108.

<sup>63</sup> Tiwari, M., Wallace, B.P. & Girondot, M. 2013. *Dermochelys coriacea* (West Pacific Ocean subpopulation). The IUCN Red List of Threatened Species 2013: e.T46967817A46967821. <http://dx.doi.org/10.2305/IUCN.UK.2013-2.RLTS.T46967817A46967821.en>; Wallace BP, Tiwari, M. & Girondot, M. 2013. *Dermochelys coriacea*. The IUCN Red List of Threatened Species: e.T6494A43526147; 10.2305/IUCN.UK.2013-2.RLTS.T6494A43526147.en.

<sup>64</sup> Benson SR, Forney KA, Harvey JT, Carretta JV, Dutton PH. 2007b. Abundance, distribution, and habitat of leatherback turtles (*Dermochelys coriacea*) off California, 1990–2003. *Fishery Bulletin* 105:337–347.

<sup>65</sup> Benson SR. 2015. Email to Mark Delaplaine, California Coastal Commission, and Peter Dutton, NMFS, dated September 28, 2015, Re: leatherback sea turtle trends, neritic zone, CA.

<sup>66</sup> Curtis, K.A., J.E. Moore, S.R. Benson. 2015. Estimating limit reference points for western Pacific leatherback turtles (*Dermochelys coriacea*) in the U.S. west coast EEZ. *PLoS ONE* 10(9):e0136452.

<sup>67</sup> NMFS 2017 Biological Opinion, at p. 58-59.

<sup>68</sup> *Id.* at 58.

Given that the waters off California are an important foraging area for leatherbacks during the summer and fall, it is likely that leatherbacks are especially affected by ship traffic seasonally. It is certain that the impact to the leatherback sea turtle population from commercial ship traffic is greater than what is observed.

***E. Vessel Speed Reductions Have Not Been Implemented Off the U.S. West Coast***

Speed restrictions are one of two primary operational measures to avoid ship strikes.<sup>69</sup> The efficacy of mandatory limits on ship speed in reducing the risk and frequency of ship collisions with whales has been repeatedly and conclusively demonstrated.<sup>70</sup> Despite the well-documented threat of ship strikes to endangered whales off the California coast, particularly in the vicinity of the Los Angeles/Long Beach and San Francisco region ports, NMFS and USCG have not proposed or established mandatory speed restrictions anywhere on the U.S. West Coast.

On September 25, 2007, the Center for Biological Diversity submitted a formal Petition pursuant to the Administrative Procedure Act requesting that NMFS initiate rulemaking in order to establish a seasonal speed limit of 10 nautical miles per hour on all vessels 65 feet or larger in the Santa Barbara Channel.<sup>71</sup> In its January 8, 2008 denial of the Center’s petition, NMFS stated that it “has carefully reviewed the information available regarding these blue whale deaths and has determined that rulemaking of any kind is not warranted at this time.”<sup>72</sup> The agency explained that it “does not believe three blue whale deaths in one year rise to the level of emergency rulemaking.” In addition, the agency characterized “the event [as] an aberration,” and stated that “[u]ntil more is known about contributing circumstances, a regulatory response . . . is not appropriate or supported by the best available information.”<sup>73</sup> Finally, NMFS concluded the Petition denial with the pledge that “[i]f circumstances similar to those occurring in 2007 recur,

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<sup>69</sup> International Maritime Organization 2009. Guidance Document for Minimizing the Risk of Ship Strikes with Cetaceans. London: IMO; *see also* R. Leaper 2019. The role of slower vessel speeds in reducing greenhouse gas emissions, underwater noise and collision risk to whales. *Front. Mar. Sci.* 6:5050. doi: 10.3389/fmars.2019.00505 (“The International Whaling Commission (IWC) has concluded that the only proven, effective mitigation measures to reduce ship strikes are to avoid areas with known concentrations of whales, or reduce speed while transiting those areas.”).

<sup>70</sup> Conn, P.B., G.K. Silber. 2013. Vessel speed reductions reduce risk of collision-related mortality for North Atlantic right whales. *Ecosphere* 4:1-15; Liat, D.W., A.R. Knowlton, D. Pendleton. 2014. Effectiveness of mandatory vessel speed limits for protecting North Atlantic right whales. *Endangered Species Res.* 23:133-147; Silber, G.K., J.D. Adams, M.J. Asaro, T.N. Cole, K.S. Moore. 2015. The right whale mandatory ship reporting system: A retrospective. *PeerJ* 3:e866.

<sup>71</sup> Center for Biological Diversity, Petition for Emergency Rulemaking to Reduce the Risk of Unlawful Take of Endangered Species.

<sup>72</sup> Memorandum from James H. Lecky, Director, Office of Protected Resources to John Oliver, Acting Assistant Administrator for Fisheries re: Decision Memorandum—Response to Petition from the Center for Biological Diversity to Implement Emergency Regulations in Southern California to Protect Blue Whales.

<sup>73</sup> *Id.*

or if there are equal or a greater number of blue whale deaths in the future, NMFS will reassess the situation in light of available information and make a decision whether a regulatory response is appropriate.”<sup>74</sup> In the meantime, when large congregations of blue whales were detected, NMFS would rely on advisories recommending that vessels voluntarily reduce their speed to 10 knots or less.<sup>75</sup>

By relying solely on observed whale deaths to estimate mortality, the NMFS Petition denial ignored the already well-known fact that documented strikes greatly underestimate actual mortality.<sup>76</sup> Since the denial, the best available science has consistently and strongly demonstrated that the 2007 mortality event was, unfortunately, not an aberration, and that vessel speed reductions are necessary to reduce this mortality. Moreover, numerous studies conducted both before and after the Petition denial have consistently found that the voluntary ship speed reduction efforts relied upon by NMFS in its Petition denial, as well as incentive-based strategies developed subsequent to that denial, are ineffectual.<sup>77</sup>

***F. The USCG Los Angeles/Long Beach and San Francisco Region Port Access Route Studies Authorized Traffic Separation Schemes That Concentrate Vessel Traffic At Unregulated Speeds in Areas of High Whale Density***

Routing measures (*i.e.* changes in the location of shipping lanes, the creation of new shipping lanes, or the expansion or creation of areas off limits to shipping, such as Areas to be Avoided) are the second primary operational measure by which ship strikes can be avoided. Acting pursuant to the PWSA, USCG completed Port Access Route Studies for the approaches to the Los Angeles/Long Beach and San Francisco Bay ports in 2011.<sup>78</sup> Both of these PARS processes resulted in routing changes that concentrate large vessel traffic in areas of high whale densities.

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<sup>74</sup> *Id.*

<sup>75</sup> *Id.*

<sup>76</sup> Laist, D.W., A.R.Knowlton, J.G. Mead, A.S. Collet, M. Pod. 2001. Collisions between ships and whales. *Marine Mammal Science* 17:35-75; Kraus, SD, et al. 2005. North Atlantic right whales in crisis. *Science* 309:561-562.

<sup>77</sup> Langpap, C., and J. Wu. 2004. Voluntary conservation of endangered species: When does no regulatory assurance mean no conservation? *Journal of Environmental Economics and Management* 47:435-457; Wiley, D.N. J.C. Moller, R.M. Pace, and C. Carlson. 2008. Effectiveness of voluntary conservation agreements: Case study of endangered whales and commercial whale watching. *Conservation Biology* 22:450-457; Jett, J.S. and B. Thapa. 2010. Manatee zone compliance among boaters in Florida. *Coastal Management*. 38:165-185; Silber, G.K., J.D. Adams, and S. Bettridge. 2012. Vessel operator response to a voluntary measure for reducing collisions with whales. *Endangered Species Research* 17:245-254; McKenna, M.F., S.L. Katz, C. Condit, and S. Walbridge. 2012. Response of commercial ships to a voluntary speed reduction measure: Are voluntary strategies adequate for mitigating ship-strike risk? *Coastal Management* 40:6, 634-650.

<sup>78</sup> Port Access Route Study: The Approaches to San Francisco, Docket USCG-2009-0576 (February 2011) (“SF PARS”); Port Access Route Study: Approaches to Los Angeles-Long Beach and in the Santa Barbara Channel, Docket USCG-2009-0765 (September 2001)(“LA/LB PARS”)

The Los Angeles/Long Beach PARS process was catalyzed by vessel traffic bypassing the existing Santa Barbara Channel TSS in order to avoid new air emissions requirements established by the California Air Resources Board (“CARB”) requiring the use of low sulfur cleaner fuels within 24 nm of the coast.<sup>79</sup> Ships using this route were transiting outside of any established TSS and through the Navy’s Point Mugu sea range.

USCG received comments on the PARS from leading whale researchers, environmental organizations, and others urging the agency to impose vessel speed restrictions and to develop routing measures in order to reduce vessel strikes of large whale species and other marine wildlife.<sup>80</sup> As acknowledged by USCG during the PARS process, the Santa Barbara Channel is host to one of the densest seasonal blue whale populations in the world, and “[s]hip strikes on whales, specifically in the Santa Barbara TSS, are a concern.”<sup>81</sup> USCG further noted that “[r]esearch by the National Marine Fisheries Service and the Channel Islands National Marine Sanctuary indicates a single TSS south of the Channel Islands would appear to minimize the overall risk of ship strikes on whales.”<sup>82</sup>

In response to public input on this and other issues, USCG presented five options in the Los Angeles/Long Beach PARS: (1) continue the status quo; (2) create western traffic lanes south of the Channel Islands; (3) eliminate the existing Santa Barbara traffic lane and create a new TSS south of the Channel Islands; (4) reduce the width of the separation zone from 2nm to 1nm in the Santa Barbara Channel TSS, keeping the northern outbound lane in its current position and moving the southern inbound lane 1 nm toward the northern lane (to move the incoming lane away from the 200 meter isobath off San Miguel and Santa Rosa Islands where high concentrations of whales are known to congregate); and (5) establish a TSS for the voluntary traffic lanes endorsed by the Harbor Safety Committee.<sup>83</sup>

USCG initially chose a combination of option 2 and option 4 to forward to the IMO for approval.<sup>84</sup> By not choosing option 3, USCG’s action did not minimize the overall risk of ship strikes on whales, but instead continued to concentrate ship traffic within the Santa Barbara Channel. The USCG then changed its decision, due to Department of Defense opposition to creating a second formal shipping lane (option 2). Accordingly, the USCG’s final decision—subject to section 7 consultation under the ESA—directed all large vessel traffic into the Los Angeles/Long Beach ports through the Santa Barbara Channel. Finally, despite the PWSA’s grant of authority to USCG to regulate ship speeds, USCG refused to propose speed restrictions in order to reduce ship strikes.<sup>85</sup>

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<sup>79</sup> LA/LB PARS, at p. 3.

<sup>80</sup> *Id.*, at p. 16; B.P. Segee, Whale of an Opportunity: Coast Guard Study of Los Angeles/Long Beach Port Access Routes Holds Great Potential for Reducing Ship Strikes within Santa Barbara Channel, *Ecology Law Currents* (August 2010).

<sup>81</sup> LA/LB PARS, at p. 16.

<sup>82</sup> *Id.* at p. 17.

<sup>83</sup> *Id.* at p. 22-28.

<sup>84</sup> *Id.* at p. 28-32.

<sup>85</sup> *Id.* at p. 32.

In contrast to the single TSS approach to Los Angeles/Long Beach ports, there are three TSS approaches to San Francisco: northern, western, and southern.<sup>86</sup> The San Francisco PARS was catalyzed by the USCG's identification of "a potential safety enhancement by increasing predictability of vessel traffic patterns in a popular offshore fishing area near the northern approach in the vicinity of Point Reyes."<sup>87</sup> Like the LA/LB PARS, USCG received comments on the PARS from leading whale researchers, environmental organizations, and others urging the agency to impose vessel speed restrictions and to develop routing measures in order to reduce vessel strikes of large whale species and other marine wildlife. Unlike the LA/LB PARS, the USCG did not propose any specific recommended routing measures to address these concerns.

In response to public input on this and other issues, USCG presented six options in the San Francisco PARS: (1) extend the northern approach by 8.5 nm and southern approach by 16.5 nm to the limit of the vessel traffic service ("VTS") area, as well as further realignment and reconfiguration; (2) extend all approaches to the limit of the VTS area with no changes to alignment or configuration; (3) extend the northern approach to the VTS limit, while combining the southern and western approach into a single southwest approach, and extending that southwest approach to the limit of the VTS; (4) extend the northern and southern approaches to the limit of the VTS, while adding a turn in the northern approach away from Point Reyes and avoiding Cordell Bank; (5) make the same changes to the northern approach as option #4, while combining the southern and western approaches into a single southwestern approach as described in option #3; and (6) continue the status quo.<sup>88</sup>

In its final recommendation, USCG chose a combination of these options, extending the northern approach 16.7 nm to the end of the VTS area and adding a turn to avoid fisheries conflicts; narrowing the western approach while extending that approach by 3 nm and changing the layout of the approach; and extending the southern approach by 8 nm to the limit of the VTS area.<sup>89</sup> USCG stated that the changes in the western approach would "keep vessels on a straightened course to the edge of the continental shelf, reducing the risk of whale strikes in an area of potential high whale density," but did not otherwise address the potential impacts of the changes on whales, or the overlap of newly designated TSS areas with whale densities.<sup>90</sup> Like the Los Angeles/Long Beach PARS, USCG refused to propose speed restrictions as part of the SF PARS in order to reduce ship strikes."<sup>91</sup>

On October 24, 2013, USCG initiated ESA section 7 consultation on the codification of the changes to the traffic separation schemes. This section 7 process culminated with NMFS' issuance of the February 23, 2017 Biological Opinion. As addressed in detail below, that Opinion is unlawful under the ESA and arbitrary and capricious in numerous respects.

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<sup>86</sup> SF PARS, at p. 13-15.

<sup>87</sup> *Id.* at p. 10.

<sup>88</sup> *Id.* at p. 25-32.

<sup>89</sup> *Id.* at p. 33-35.

<sup>90</sup> *Id.* at p. 34.

<sup>91</sup> *Id.* at p. 23.

### III. Violations of the Endangered Species Act

#### A. *The 2017 Biological Opinion Is Unlawful*

NMFS' February 23, 2017 Biological Opinion for the regulatory codification of Traffic Separation Schemes Near the Ports of Los Angeles/Long Beach and San Francisco region is arbitrary, capricious, and contrary to the ESA. 16 U.S.C. § 1536; 5 U.S.C. § 706(2)(A).<sup>92</sup> The Biological Opinion is unlawful, arbitrary, and capricious for at least the following reasons:

##### 1. Unlawful Environmental Baseline

The ESA requires that NMFS properly define the “environmental baseline” as an integral aspect of conducting a lawful jeopardy analysis in a Biological Opinion. ESA regulations define the environmental baseline as “refer[ing] to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action.”<sup>93</sup> As explained by the ESA Consultation Handbook, “[t]he environmental baseline is a ‘snapshot’ of a species’ health at a specified point in time.”<sup>94</sup>

Here, the Biological Opinion fails to clearly or accurately describe the current “snapshot” of species health. Most obviously, NMFS never directly addresses the fact that even the most conservative estimated mortality rates of blue whales, fin whales, humpback whales, and leatherback sea turtles significantly exceed annual biological thresholds set by NMFS. Although the Biological Opinion’s baseline analysis includes a selective acknowledgement of Redfern *et al.* (2013), quoting the portion of the study which “estimated 5.9 humpback whales, 10.6 blue whales, and 7.1 fin whales were struck by ships each year,” NMFS never addresses these mortality rates in relation to PBR levels.<sup>95</sup> The estimated 10.6 blue whale deaths annually, for example, was more than 4 times the 2.3 PBR level in place at that time.<sup>96</sup> By ignoring existing quantified data addressing the impacts of ship strikes on the recovery trajectory of great whales off the California coast—the *leading* cause of mortality to blue and fin whales—the Biological Opinion’s baseline analysis “impermissibly failed to incorporate degraded baseline conditions into its jeopardy analysis.”<sup>97</sup>

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<sup>92</sup> The Center provides notice of violations to NMFS as a courtesy, as NMFS’ violations of the ESA in relation to its preparation of the Biological Opinion are not subject to the ESA citizen suit provision. 16 U.S.C. § 1540(g). See *W. Watersheds Project v. Kraayenbrink*, 620 F.3d 1187, 1195 (9th Cir. 2010) (“We review claims brought under the ESA under the citizen-suit provision of the ESA or, when the citizen-suit provision is unavailable, under the APA.”).

<sup>93</sup> 50 C.F.R. § 402.02.

<sup>94</sup> ESA Consultation Handbook, p. 4-22 (1998). [https://www.fws.gov/endangered/esa-library/pdf/esa\\_section7\\_handbook.pdf](https://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf).

<sup>95</sup> 2017 Biological Opinion, at p. 58.

<sup>96</sup> Redfern *et al.* (2013).

<sup>97</sup> *Nat’l Wildlife Fed’n. v. Nat’l Marine Fisheries Serv.*, 481 F.3d 1224, 1235 (9th Cir. 2007).



In addition, the Biological Opinion’s baseline fails to accurately account for the “past and present impacts of all Federal, State, or private actions and other human activities in the action area.”<sup>98</sup> ESA regulations do not define jeopardy solely in relation to the proposed action, but in the aggregate context of all effects (including past, present, and cumulative) of the proposed action in relation to the species’ current status and habitat.<sup>99</sup> Accordingly, “[s]imply reciting the activities and impacts that constitute the baseline and then separately addressing only the impacts of the particular agency action in isolation is not sufficient.”<sup>100</sup> In violation of this mandate, the Biological Opinion omits numerous past and present Federal, state, or private actions in the action area that have shaped the existing baseline for blue, fin, and humpback whales, and leatherback sea turtles.

Most obviously, NMFS fails to discuss past USCG actions, beginning in 1969, under the PWSA to establish TSSs in the approaches to Los Angeles/Long Beach and San Francisco region ports in its baseline analysis.<sup>101</sup> These past USCG decisions are directly relevant to the species’ baseline, as they have concentrated vessel traffic within areas of high whale densities, yet the impacts of these decisions have never been previously assessed under the Endangered Species Act. This concentration is most evident in the approaches to Los Angeles/Long Beach ports, where USCG has repeatedly chosen to direct all traffic into a single TSS through the Santa Barbara Channel. For example, a 1982 PARS found that “93 percent [of shipping traffic was] using the Santa Barbara TSS by 1979.”<sup>102</sup> The failure to include the past and present-day impacts of historic USCG TSS decisions in the baseline analysis is unlawful.<sup>103</sup>

In addition, NMFS ignores its January 8, 2008 denial of the Center for Biological Diversity’s Petition to establish vessel speed limits on both an emergency and non-emergency basis in order to conserve endangered blue whales. An agency’s “denial of a petition for rulemaking constitutes final, reviewable agency action.”<sup>104</sup> Accordingly, NMFS’ petition denial is a Federal action that must be considered as part of the baseline. The petition denial is relevant

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<sup>98</sup> 50 C.F.R. § 402.02.

<sup>99</sup> *Id.* § 402.14(g).

<sup>100</sup> *Defenders of Wildlife v. Babbitt*, 130 F. Supp. 2d 121, 128 (D.D.C. 2001).

<sup>101</sup> Instead, NMFS relegates discussion of these past actions to an attachment to the Biological Opinion. Attachment 1 to Biological Opinion—History of Shipping Lanes and TSSs in California, at p. 117-122; *id.* at p. 118 (“Although NMFS could not find information on why the TSSs were established in the areas, review of subsequent modifications of the TSSs indicate that very little change to the original lanes has been made.”).

<sup>102</sup> *Id.*

<sup>103</sup> *Am. Rivers & Ala. Rivers Alliance*, 895 F.3d at 46 (“In defining the environmental baseline, the Opinion reasoned that certain activities that ‘began as early as the 1920’s are beyond the scope of the consultation.’ This exclusion of the historic impacts on the Coosa River Project appears to be inconsistent with the guidance in the ESA handbook . . . By discarding the methodology set forth in its own handbook and its own regulatory definitions, *see* 50 C.F.R. § 402.02, the Fish and Wildlife Service acted arbitrarily in establishing the environmental baseline without considering the degradation to the environment caused by the Coosa River’s operation and its continuing impacts.”).

<sup>104</sup> *Weight Watchers Int’l v. FTC*, 47 F.3d 990, 992 (9th Cir. 1994).

to the baseline because “the probability of serious injury or mortality [of large whale species] increases with ship speeds.”<sup>105</sup>

At the time of the 2008 petition denial, NMFS expressed its belief that the 2007 ship strike deaths were an aberration, and committed to reassessing the need for regulatory speed limits if that belief proved to be incorrect. Between the date of the Petition denial and Biological Opinion, new scientific literature as well as NMFS’ own data repeatedly confirmed that the 2007 mortality events were not an aberration, but have instead demonstrated that mortality levels in fact far exceed previous mortality estimates. NMFS’ petition denial was an affirmative decision that has allowed large vessels to continue transiting the Santa Barbara Channel at unregulated high speeds, causing injury and mortality to blue, fin, and humpback whales which is in part responsible for the species’ degraded baseline.

The Biological Opinion also inadequately addresses how past and present state and federal fisheries and fishery management measures are impacting the species’ baseline condition, particularly humpback whales and leatherback sea turtles. The baseline analysis does not even “simply recite” the specific state and federal actions, but instead refers vaguely to a “number of fisheries based out of west coast ports [which] incidentally interact with this stock of humpback whale,” and provides a generalized estimate of 53 humpback whale mortalities from fisheries from 1998 through 2013.<sup>106</sup> NMFS makes no attempt to compile the current ESA consultation status of federal fisheries, to quantify the total incidental take of the CA/OR/WA stock of humpback whales from those fisheries, or to estimate take from state managed fisheries, and it is thus impossible to accurately ascertain this facet of the species’ baseline condition in the action area.

NMFS provides slightly more detailed information with respect to leatherback sea turtles, noting that the most recent ESA consultation for the drift gillnet fishery authorized the ITS of ten leatherbacks in five years, and that another ESA consultation for the Federal groundfish fishery authorized the ITS of three leatherbacks in eight years. The Biological Opinion, however, does not attempt to synthesize the known information addressing ship strike take in conjunction with the known information addressing fisheries take. Nor does NMFS explain how those takes are collectively impacting leatherback sea turtles within the action area given the species’ limited population off California, its globally declining population, and the fact that NMFS has estimated that total mortality of leatherbacks on the U.S. West Coast must be kept to less than one every six years to avoid delaying the population’s rebuilding.<sup>107</sup> Without a lawful baseline analysis, NMFS cannot “appropriately consider the effects of [the USCG’s] actions within the context of other existing human activities that impact the listed species.”<sup>108</sup>

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<sup>105</sup> 2017 Biological Opinion, at p. 56.

<sup>106</sup> 2017 Biological Opinion, at p. 60.

<sup>107</sup> Curtis *et al.* 2015.

<sup>108</sup> *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 524 F.3d 917, 930 (9th Cir. 2008).

## 2. Unlawful Effects Analysis

The Biological Opinion's inadequate presentation of the species' baseline, in turn, also fundamentally poisons the validity of the effects analysis. Rather than conducting a lawful evaluation of the effects of the USCG's codification of Los Angeles/Long Beach and San Francisco traffic separation schemes in relation to the baseline, NMFS builds its analysis around a hypothetical "no-lane scenario."<sup>109</sup> Indeed, NMFS appears to use the no-lane framework as a means of avoiding incorporating the baseline into the effects analysis, noting that "[b]ecause the TSSs have been in place since the late 1960s, there isn't a time in recent history that can serve as the no-lane scenario of ship distribution patterns without a TSS in place."<sup>110</sup>

As stated by NMFS, the no-lane framework "assess[es] the consequences of organizing and condensing traffic patterns versus a potentially disorganized and spread-out pattern of shipping traffic."<sup>111</sup> NMFS claims that "[t]his no-lane scenario was helpful to evaluate the effects of codifying the TSS's on the resulting ship traffic patterns and resultant impacts on listed species in the action areas, although we recognize that the prior forms of the lanes themselves have been [in] use for several decades."<sup>112</sup> Relying on this theoretical construct, NMFS concludes "that the overall exposure profile for whales and leatherback sea turtles is expected to decrease compared to the no-lane scenario."<sup>113</sup>

This conclusion is of little value. This hypothetical approach has no basis or relevance to the real-world governance of international shipping or the basic reliance on TSSs as a way to safely organize that traffic. The use of the hypothetical no-lane approach thus does not provide a rational basis for determining the "effects of the action."<sup>114</sup>

NMFS' no-lane construct is particularly unhelpful given USCG's specific consideration of several detailed TSS options during the PARS process for both Los Angeles/Long Beach and San Francisco region ports. This consideration illustrates the discretionary authority USCG has in deciding how many TSSs to establish, where to establish those TSSs, and how to configure the chosen TSSs. In addition, the PWSA vests USCG with authority to regulate ship speeds, although the agency denies it can use that authority for the protection of whales.

These choices, in turn, will result in varying degrees of impact to endangered blue whales, fin whales, humpback whales, and leatherback sea turtles. The Los Angeles/Long Beach PARS, for example, clearly states that the best available scientific data "indicates a single TSS south of the Channel Islands would appear to minimize the overall risk of ship strikes on

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<sup>109</sup> 2017 Biological Opinion, at p. 18 ("In order to evaluate the effects of codification of the TSSs, we developed a no-lane scenario, that is, the proposed action areas with no TSSs and the likely behavior of ships absent the TSSs and the exposure and risk to species.").

<sup>110</sup> *Id.* at p. 64

<sup>111</sup> *Id.*

<sup>112</sup> *Id.*

<sup>113</sup> *Id.* at p. 88.

<sup>114</sup> 50 C.F.R. § 402.02.

whales.”<sup>115</sup> USCG did not choose this recommendation, however, but instead made a discretionary decision to continue directing traffic through the Santa Barbara Channel. The impacts of this decision on endangered whales were further heightened when the U.S. Navy discouraged the USCG from deciding to create a second lane on the southern side of the Channel Islands.

In the Biological Opinion, NMFS obliquely appears to suggest that USCG’s delineation of TSSs have no real impacts, and vessel owners make transit decisions with no regard for their establishment.<sup>116</sup> NMFS is, of course, incorrect. Although some vessel owners may flout established shipping lanes, and increase the risk of collisions, Congress’s direction to USCG in the PWSA to designate TSSs and the strident opposition of the shipping industry and other stakeholders (such as the U.S. Navy) to certain routing changes demonstrates the real consequences of TSS designations. In addition, studies repeatedly demonstrate that vessel operators will comply with measures to protect whales from ship strikes when those measures are made mandatory and are enforced.<sup>117</sup> NMFS itself acknowledged in the Biological Opinion that the changes in the San Francisco TSS northern approach moving that lane away from the Gulf of the Farallones and Cordell Bank National Marine Sanctuaries “indicated a 69% reduction in the footprint of ship traffic” in those waters.<sup>118</sup>

In sum, contrary to NMFS’ internally inconsistent assertion that TSSs are of little consequence, USCG’s 2013 TSS decisions resulted in adverse impacts to blue whales, fin whales, humpback whales, and leatherback sea turtles that are not adequately addressed in the Biological Opinion.

### **3. Failure to Provide Incidental Take Statement**

ESA section 7(b)(4) requires NMFS to issue an ITS for agency actions that will not jeopardize a protected species, but are reasonably certain to result in incidental take of members of the species.<sup>119</sup> The ITS must specify the impact (*i.e.* the amount or extent) of such take, and the reasonable and prudent measures necessary or appropriate to minimize such impacts.<sup>120</sup> In the case of marine mammals, the ITS must also specify those measures necessary to comply with

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<sup>115</sup> LA/LB PARS, at p. 17.

<sup>116</sup> *See, e.g.*, 2017 Biological Opinion, at p. 65 (“Regulatory actions [such as the CARB low sulfur rule] will impact shipping patterns and this is true with or without the TSSs in place.”); *id.* (“Based upon the influences on ship traffic from regulatory and non-regulatory forces, including economics and international trade, NMFS assumes that ship traffic would generally occur in the same areas, that is, the ports of LA/LB and SF and through the [Santa Barbara Channel], with the TSSs in place or under the no-lane scenario.”); *id.* at p. 67 (“[T]he proposed action is unlikely to significantly change general ship patterns across the action areas.”).

<sup>117</sup> Lagueux, K.M., M.A. Zani, A.R. Knowlton, S.D. Kraus (2011). Response by vessel operators to protection measures for right whales *Eubalaena glacialis* in the southeast U.S. calving ground. *Endangered Species Res.* 14:69-77

<sup>118</sup> 2017 Biological Opinion, at p. 69.

<sup>119</sup> 16 U.S.C. § 1536(b)(4); 1536(o)(2); 50 C.F.R. § 402.14(g)(7).

<sup>120</sup> 50 C.F.R. § 402.14(i)(1)(i)-(ii).

the take requirements of the MMPA.<sup>121</sup> In addition, the ITS must describe the terms and conditions necessary to implement these measures.<sup>122</sup> Finally, the ITS must “specif[y] the procedures to be used to handle or dispose of any individuals of a species actually taken.”<sup>123</sup>

The Biological Opinion ITS contains *none* of these required elements, based on NMFS’ specious assertion that it “does not anticipate incidental take of listed species from the proposed action.”<sup>124</sup> Instead, NMFS concludes “that the effects on fin whales and leatherbacks are extremely unlikely and therefore discountable, not rising to the level of take.”<sup>125</sup> With respect to humpback and blue whales, NFMS states that it “could not detect a change in the risk profile from the proposed action such that take is considered likely to occur as a result of the proposed action.”<sup>126</sup> These conclusions are built upon the arbitrary baseline and effects analyses of the Biological Opinion, as described above.<sup>127</sup> Contrary to NMFS’ unsupportable conclusions, the best available scientific data indisputably demonstrates that large vessel traffic transiting into or from the Los Angeles/Long Beach and San Francisco region ports, the location of which is regulated and directed by USCG’s establishment of TSSs and lack of speed restrictions, kills, injuries, or otherwise results in the take of blue whales, fin whales, humpback whales, and leatherback sea turtles.<sup>128</sup>

#### 4. Failure to Consider Species Recovery

In conducting a jeopardy analysis, “NMFS must analyze effects on recovery as well as effects on survival.”<sup>129</sup> Recovery is in fact the central goal of the ESA, and is defined as “improvement in the status of the species to the point where listing is no longer appropriate under the criteria set out in section 4(a)(1) of the Act.”<sup>130</sup> Assessing the metrics of recovery with

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<sup>121</sup> *Id.* § 402.14(i)(1)(iii).

<sup>122</sup> *Id.* § 402.14(i)(1)(iv).

<sup>123</sup> *Id.* § 402.14(i)(1)(v).

<sup>124</sup> 2017 Biological Opinion, at p. 96

<sup>125</sup> *Id.*

<sup>126</sup> *Id.*

<sup>127</sup> *See, e.g., id.*, at p. 95 (“[T]he overall risk of a strike is decreased by the constriction of shipping traffic patterns to the designated land versus the no-lane Scenario. We find that the likelihood of a whale being struck because of the proposed action is indistinguishable from the existing risk of a strike and this likelihood is not increased by the proposed action.”).

<sup>128</sup> *Ramsey v. Kantor*, 96 F.3d 434, 437 (9th Cir. 1996); *see also* Biological Opinion for the West Mojave Route Network Project, San Bernardino, Inyo, Kern, Riverside, and Los Angeles Counties, California (Sept. 30, 2019), at p. 63 (authorizing the incidental take of eight desert tortoise annually from the “effects of casual use of the Bureau [of Land Management’s] route network.”). The Opinion defines “casual use” as “refer[ring] to individuals using routes designated as open; these non-commercial uses do not require individual authorization from the Bureau.” *Id.* at 2. Similarly, large vessels transiting the TSSs in the approaches to the Los Angeles/Long Beach and San Francisco Bay region ports do not require individual authorization from USCG.

<sup>129</sup> *Nat’l Wildlife Fed’n*, 524 F.3d at 932. Similarly, the Consultation Handbook defines “survival” for purposes of the jeopardy analysis as “the condition in which a species continues to exist into the future while retaining the potential for recovery.” Consultation Handbook, at p. xviii-xiv.

<sup>130</sup> 50 C.F.R. § 402.02.

respect to ESA-listed marine mammal species is aided by the marine mammal stock assessment reports that NMFS revises annually. By law, in those reports NMFS identifies the maximum number of animals that can be lost through mortality (other than by natural causes) “while allowing that stock to reach or maintain its optimum sustainable population.”<sup>131</sup>

The Biological Opinion is, however, devoid of any analysis of whale mortality from ship strikes in relation to NMFS’s own biological thresholds, and contains absolutely no discussion of how the proposed action, in the aggregate with the existing environmental baseline, is impacting the recovery of blue whales, fin whales, humpback whales, and leatherback sea turtles. The lack of recovery analysis renders the Biological Opinion and no-jeopardy finding arbitrary and capricious.<sup>132</sup>

## 5. Inadequate Cumulative Effects Analysis

As part of formal consultation, NMFS must evaluate “cumulative effects on the listed species or critical habitat.”<sup>133</sup> Under the ESA, “cumulative effects” are “those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area or the Federal action subject to consultation.”<sup>134</sup> Like other parts of a Biological Opinion, NMFS’ assessment of cumulative effects must include a meaningful analysis.<sup>135</sup>

The Biological Opinion, however, contains no such analysis. Although NMFS mentions state fisheries, “[t]he section contains no explanation of how the various . . . fisheries and fishery management measures interrelate and how the overall management regime may or may not affect” whales and leatherback sea turtles.<sup>136</sup> Similarly, NMFS refers vaguely to “infrastructure improvements [that] are underway [at LA/LB ports] to accommodate large vessels in the future” but makes no attempt to analyze how these future actions may impact the frequency and lethality of ship strikes.<sup>137</sup> The Biological Opinion contains no information on similar proposals at San Francisco Region ports. NMFS’ failure to comprehensively address port expansion, dredging, and other projects, and the Biological Opinion’s complete lack of analysis concerning the

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<sup>131</sup> 16 U.S.C. §§ 1362(20); 1386(a)(6).

<sup>132</sup> *Nat’l Wildlife Fed’n*, 481 F.3d at 1238 (“The question before us is not whether, on the merits, recovery risks in fact require a jeopardy finding here, but whether, as part of the consultation process, NMFS must conduct a full analysis of those risks and their impacts on the listed species’ continued existence. Although recovery impacts alone may not *often* prompt a jeopardy finding, NMFS’s analytical omission here may not be dismissed as harmless.”) (emphasis in original).

<sup>133</sup> 50 C.F.R. § 402.14(g)(3).

<sup>134</sup> *Id.* § 402.02.

<sup>135</sup> *Greenpeace v. Nat’l Marine Fisheries Serv.*, 80 F. Supp. 2d 1137, 1149 (W.D. Wash. 2000) (“Although BiOp2 states that its conclusions are based on a ‘cumulative effects analysis,’ and even contains a section titled ‘Cumulative Effects,’ in fact this section contains no analysis whatsoever and is nothing more than a list of the fisheries . . .”).

<sup>136</sup> *Id.*

<sup>137</sup> 2017 Biological Opinion, at p. 95.

potential impacts of these private projects on listed whales and leatherback sea turtles, results in an unlawful and inadequate cumulative effects analysis.

## **6. Failure to Rely on Best Available Scientific Data**

By failing to properly define the environmental baseline or consider the aggregate effects of the agency action in the context of the environmental baseline on species recovery, NMFS also systematically disregarded or failed to properly utilize the best available scientific data in conducting the Biological Opinion's jeopardy analysis, as required by the ESA.<sup>138</sup> NMFS also failed to use the best available scientific data regarding the impacts of commercial ship traffic on whales and sea turtles when it entirely failed to quantify take of whales and sea turtles in the Biological Opinion.

## **7. Failure to Ensure Against Jeopardy**

The Biological Opinion's inadequate baseline, effects, and recovery analyses render its jeopardy analysis arbitrary and capricious, in violation of ESA section 7(a)(2). Had NMFS provided an adequate consideration of the environmental baseline, properly conducted its effects analysis in relation to the existing conditions and species baseline rather than a hypothetical "no lanes" alternative, conducted an adequate analysis of the aggregate impacts of the proposed action in relation to the environmental baseline on recovery, and utilized the best available scientific data, such consideration could result in a jeopardy determination for the endangered whales and leatherback sea turtle.

This jeopardy determination would, in turn, have required NMFS to develop reasonable and prudent alternatives ("RPAs") to the proposed action.<sup>139</sup> Among other alternatives, potential RPAs could include a recommendation to seasonally prohibit large vessel traffic within the Santa Barbara Channel and one or more approaches to San Francisco region ports, creation of new or expanded Areas to be Avoided, and other routing measures within USCG jurisdiction.

Even those RPAs may be inadequate to prevent jeopardy in the absence of USCG and/or NMFS action to regulate ship speeds. The best available scientific data overwhelmingly shows that such regulation is needed, at a minimum, within the approaches to the ports, and increasingly indicates that some form of speed regulation is also needed in other areas along the U.S. West Coast. Since USCG asserts these measures are within the consulting agency NMFS' jurisdiction rather than the action agency USCG's, the Biological Opinion may not be able to avoid a jeopardy determination.<sup>140</sup>

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<sup>138</sup> 16 U.S.C. § 1536(a)(2)

<sup>139</sup> 50 C.F.R. § 402.14(h)(2).

<sup>140</sup> See Consultation Handbook, at p. 4-44 ("Although a strong effort should always be made to identify [RPAs], in some cases, no alternatives are available to avoid jeopardy . . . Examples include cases in which the corrective action relies on: . . . actions of a third party not involved in the proposed action (*e.g.*, only [NMFS]), which is not [the action agency] to the consultation, has the authority to regulate speed limits").

### **B. USCG Unlawfully Relied on NMFS' Biological Opinion**

As described above, the 2017 Biological Opinion is unlawful and does not ensure against jeopardy as required by section 7(a)(2) of the ESA. In particular, the Biological Opinion fails to adequately define the environmental baseline, improperly relies on a hypothetical “no lanes” alternative to assess the aggregate impacts rather than existing conditions, fails to consider the aggregate impacts on the recovery of blue, fin, humpback whales, and leatherback sea turtles, and failed to use the best scientific data available. For all these reasons, the Biological Opinion’s jeopardy analysis is arbitrary and capricious.

An action agency “may not rely solely on a [NMFS] biological opinion to establish conclusively its compliance with its substantive obligations under [ESA] section 7(a)(2).”<sup>141</sup> By relying on the 2017 Biological Opinion in authorizing the TSS, the USCG is failing to ensure its actions will avoid the likelihood of jeopardy to blue whales, fin whales, humpback whales, and leatherback sea turtles.<sup>142</sup> Therefore, the USCG has violated, and continues to violate, section 7(a)(2) of the ESA.<sup>143</sup>

### **C. NMFS and USCG Are Violating Section 9 Take Prohibitions**

NMFS and USCG are violating section 9 of the ESA by causing the take of a listed species to be committed and failing to regulate ship traffic in a way that avoids take of listed species. Take includes both direct and indirect harm and it need not be purposeful.<sup>144</sup> The take prohibition applies to any “person,” including federal agencies and/or officials in their official capacity.<sup>145</sup> The ESA further makes it unlawful for any person, including federal agencies and/or federal officials in their official capacity, to “cause to be committed” the take of a listed species. Similarly, the failure to regulate in a way that avoids take of listed species can also constitute a prohibited Section 9 take.<sup>146</sup>

Here, the USCG’s authorization of the TSS, and USCG’s and NMFS’ failure to institute vessel speed restrictions, result in ongoing take of blue whales, fin whale, humpback whales, and leatherback sea turtles, and future activities that are reasonably likely to result in take of these ESA-protected animals.<sup>147</sup> No incidental take statement or section 10 permits have been issued authorizing these takes, meaning each of these takes is a violation of the ESA.

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<sup>141</sup> *Pyramid Lake Paiute Tribe of Indians v. Dep’t of Navy*, 898 F.2d 1410, 1415 (9th Cir. 1990).

<sup>142</sup> 16 U.S.C. § 1536(a)(2); *see also, e.g., Defenders of Wildlife v. EPA*, 420 F.3d 946, 976 (9th Cir.2005), *rev’d on other grounds, Nat’l Ass’n of Home Builders v. Defenders of Wildlife*, 551 U.S. 644 (2007); *Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 532 (9th Cir. 2010); *Pyramid Lake Tribe of Indians*, 898 F.2d at 1415.

<sup>143</sup> 16 U.S.C. § 1536(a)(2).

<sup>144</sup> *Id.* § 1538.

<sup>145</sup> *Id.*

<sup>146</sup> *Strahan v. Coxe*, 127 F.3d 155 (1st Cir. 1997).



#### **D. NMFS and USCG Unlawfully Failed to Reinitiate Consultation**

Consulting and action agencies must reinitiate consultation on agency actions if: (a) the amount or extent of taking specified in the incidental take statement is exceeded; (b) 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; (c) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or (d) a new species is listed or critical habitat designated that may be affected by the identified action.<sup>148</sup>

Since completion of the February 2017 Biological Opinion, significant new information has arisen revealing effects of the USCG TSS actions that affect listed whales and leatherback sea turtles in a manner or to an extent not previously considered, and demonstrating that the amount or taking specified in the incidental take statement is exceeded (as NMFS did not include an ITS authorizing any level of take).<sup>149</sup> The need for reconsultation is particularly evident given the existing inadequacies of the Biological Opinion, and NMFS' failure to lawfully consider the effects of the regulatory codification of TSSs near the ports of Los Angeles/Long Beach and the San Francisco region in the aggregate with other effects and in the context of a properly defined environmental baseline, as well as the failure to provide a lawful ITS.

This new information demonstrates several points that were already previously demonstrated by the best available scientific data but which NMFS did not properly consider in the Biological Opinion: (1) whale mortality from ship strikes is many factors greater than observed mortality; (2) this mortality is negatively impacting whale recovery; (3) non-regulatory approaches to reducing ship speeds, including incentive programs, are ineffectual; and (4) in order to protect whales, shipping lane modifications and enforceable regulatory speed limits are needed not only in TSS approaches, but other vessel transit areas along the California coast.

With respect to the ratio of actual to observed whale mortality from ship strikes, Rockwood *et al.* 2017 concluded that "mortality estimates" for all three species are "far higher

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<sup>148</sup> 50 C.F.R. § 402.16(a)(1)-(4).

<sup>149</sup> Rockwood RC, Calambokidis J, Jahneke J. 2017. 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.

Rockwood, R.C. and J. Jahneke. 2019. Management recommendations to reduce deadly whale strikes off California. Report for the National Oceanic and Atmospheric Administration, the United States Coast Guard, and the Maritime Industry.

Redfern, J.V., T.J. Moore, E.A. Becker, J. Calambokidis, S.P. Hastings, L.M. Irvine, B.R. Mate, D.P. Palacios. 2019. Evaluating stakeholder-derived strategies to reduce the risk of ships striking whales. *Divers. Distrib.* 25:1757-1595 ("Redfern *et al.* 2019a").

Redfern, J.V., E.A. Becker, T.J. Moore. 2019. Effects of variability in ship traffic and whale distributions on the risk of ships striking whales. *Front. Mar. Sci.* 6:793. doi:10.3389/fmars.2019.00793.

<https://www.frontiersin.org/articles/10.3389/fmars.2019.00793/full> ("Redfern *et al.* 2019b")

NOAA U.S. Pacific Marine Mammal Stock Assessment: 2017 (2018).

than current estimates.”<sup>150</sup> **Even the study’s “most conservative model” estimated mortality to be 7.8x, 2.0x and 2.7x NMFS’ recommended serious injury and mortality limit for blue, humpback, and fin whales,** respectively, suggesting that death from vessel collisions “may be a significant impediment to population growth and recovery.”<sup>151</sup> A 2019 follow-up study concluded that even the 2017 study estimates were an underestimate, particularly in relation to humpback whale mortality during winter months.<sup>152</sup>

Scientific literature published since the 2017 Biological Opinion also affirms that this mortality cannot be effectively addressed through voluntary or incentive-based approaches. As summarized in Redfern *et al.* 2019a, studies on both the “West and East Coasts of the United States have shown little compliance with voluntary speed reductions,” and “reach only a small percentage of ships travelling.”<sup>153</sup> In order to conserve and recover endangered whale species off the U.S. West Coast, mandatory speed reductions should be instituted “year-round, according to the relationship between speed and the probability that a collision is lethal.”<sup>154</sup> These conclusions were echoed by Rockwood and Jahncke 2019, which concluded “that the combination of port incentives and voluntary speed limits had little to no impact on reducing whale mortality in southern California,” and that it “is likely that imposing legal requirements in the California shipping lanes . . . will be necessary to reduce mortality below PBR levels.”<sup>155</sup>

Finally, the new information also provides strong evidence that in order to avoid whale mortality and assist recovery of endangered populations, additional routing measures and slower ship speeds in areas outside established TSSs are likely necessary. Rockwood *et al.* 2017 noted that “while regulation in shipping lanes is an important component of ship strike mitigation and a logical starting place, if limited to the TSSs, even the most successful regulation will not be sufficient to decrease ship strikes to anywhere near PBR levels.” The study’s authors concluded that “implementation of a graduated slow-steaming requirement within the U.S. Exclusive Economic Zone where ships travel at increasingly reduced speed as they travel closer to shore” is the recommendation with “the greatest potential to mitigate the widespread threat of vessel strikes.”<sup>156</sup> Similarly, Redfern *et al.* 2019b concluded that the “consistency in risk suggests that specific spatial management measures (*e.g.* changing shipping lanes, creating areas to be avoided, and seasonal speed restrictions) can provide an effective means of mitigating risk resulting from ship traffic variability off California.”

In light of this extensive new and significant information, NMFS’ and the USCG’s ongoing failure to reinitiate and complete new consultation violates the ESA.

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<sup>150</sup> Rockwood *et al.* 2017.

<sup>151</sup> *Id.* (emphasis added).

<sup>152</sup> C. Rockwood and Jahncke, J. 2019. 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.

<sup>153</sup> Redfern *et al.* 2019a.

<sup>154</sup> *Id.*

<sup>155</sup> Rockwood and Jahncke 2019.

<sup>156</sup> *Id.*

## CONCLUSION

To the extent required, this Notice is provided pursuant to the ESA's citizen suit provision, 16 U.S.C. § 1140(g), on behalf of Center for Biological Diversity. If NMFS and USCG do not remedy these violations within the next 60 days, the Center intends to file suit in federal court.

Sincerely,



Brian Segee  
Senior Attorney  
bsegee@biologicaldiversity.org  
T: (805) 750-8852  
U.S. mail:  
Center for Biological Diversity  
660 S. Figueroa Street, Suite 1000  
Los Angeles, CA 90017



Catherine W. Kilduff  
Senior Attorney  
ckilduff@biologicaldiversity.org  
U.S. mail:  
Center for Biological Diversity  
1212 Broadway, Suite #800  
Oakland, CA 94612