

UNITED STATES OF AMERICA
DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

In re:

**Proposed Waiver and Regulations Governing
the Taking of
Eastern North Pacific Gray Whales
by the Makah Indian Tribe**

Administrative Law Judge
Hon. George J. Jordan
Docket No. 19-NMFS-0001
RINs: 0648-BI58; 0648-XG584

DECLARATION OF DJ SCHUBERT

I, Donald J. (DJ) Schubert, hereby submit this direct testimony on behalf of the Animal Welfare Institute (AWI). At the hearing, I and/or others on behalf of AWI with appropriate expertise, such as Dr. Naomi Rose (who could not prepare direct testimony herself due to numerous conflicts) may testify:

1. I have been employed by the Animal Welfare Institute (AWI) as a wildlife biologist since 2005. My portfolio at AWI includes working on national and international wildlife protection issues, including wildlife trade, trapping, predator management, human-wildlife conflicts, cetacean protection and conservation, and the management of wild horses and burros.
2. I received a bachelor's degree in wildlife management from Arizona State University in 1983.
3. Prior to my employment at AWI, I worked for The Humane Society of the United States (January – September 2005), The Fund for Animals (1990-1995 and 2002-2005), Meyer & Glitzenstein (1995-1998), and People for the Ethical Treatment of Animals (1986-

1988). Between 1988-1990 and 1998-2002 I was self-employed as a wildlife consultant. Shortly after graduation from college I served as a Peace Corps volunteer in Burkina Faso, West Africa from 1984-1986.

4. I have been involved in the Makah Tribe's whaling issue since at least 1996 or 1997. In my decades of work on this issue I have read numerous scientific studies on gray whales, their ecology, biology, behaviors, threats to the species and their habitat, on ocean ecology, ocean warming and its implications to ecosystem functioning, marine invertebrates, Arctic Ocean ecology, contaminants in gray whales, ecosystem regime shift in the arctic, and other related topics. I have also reviewed reports and published studies on the history of the Makah Tribe, its relationship with other tribes in the Northwest, and its cultural practices. I have participated in numerous meetings, telephone calls, and electronic calls about this matter over the years with other conservationists, scientists, and attorneys. I have also travelled to Neah Bay, Washington to visit the Makah reservation on two occasions including to visit with the late Alberta "Binki" Thompson, a Makah tribal member who was an outspoken opponent of the tribe's efforts to kill gray whales and to visit the Makah Tribal museum.
5. Since my involvement in this issue began, I have prepared many letters, reports, action alerts, fact sheets, briefing documents, comments and other written materials on this subject. In 1997, I assisted in the preparation of a letter submitted by Meyer & Glitzenstein on behalf of The Fund for Animals and other organizations to the National Marine Fisheries Service (NMFS) raising concerns about its failure to comply with the National Environmental Policy Act (NEPA) prior to seeking a gray whale catch limit or

quota from the International Whaling Commission in 1997. In 1999 and 2001, on behalf of The Fund for Animals, I reviewed two separate environmental assessments prepared pursuant to NEPA by NMFS to assess the environmental impacts of Makah whaling and submitted substantive comments on both. In 1998, again on behalf of The Fund for Animals, I prepared substantive comments on a proposed rule published by the U.S. Coast Guard to establish a moving exclusionary zone around Makah whaling vessels when pursuing and hunting whales as permitted by NMFS. Proposed Rule, 63 Fed. Reg. 39256 (July 22, 1998); Interim Rule, 63 Fed. Reg. 52603 (Oct. 1, 1998), Final Rule, 64 Fed. Reg. 61209 (Nov. 10, 1999). In 2010, I worked with Australians for Animals to petition NMFS to designate the Eastern North Pacific gray whale population as depleted under the Marine Mammal Protection Act (MMPA); that petition was denied by NMFS. In the late 1990s and early 2000s I also worked closely with attorneys at Meyer & Glitzenstein in the preparation and pursuit of two lawsuits, *Metcalf v. Daley*, 214 F.3d 1135 (9th Cir. 2000) and *Anderson v. Evans*, 371 F.3d 475 (9th Cir. 2004), which successfully challenged the two environmental assessments prepared by NMFS and led to a decision by the court in *Anderson* that NMFS was required to prepare an Environmental Impact Statement (EIS) to properly evaluate the full range of impacts of Makah whaling and that the Makah would be required to obtain a waiver of the MMPA from NMFS to hunt gray whales, an activity which is otherwise prohibited by the MMPA.

6. In 2008, in response to the first Draft Environmental Impact Statement (DEIS) prepared on Makah whaling, I submitted, on behalf of AWI and other organizations, substantive comments identifying a number of deficiencies with the government's analysis. This

DEIS was terminated in 2012. 84 Fed. Reg. 13604, 13605. The second DEIS was published in 2015 and, again on behalf of AWI, Cetacean Society International, International Marine Mammal Project of Earth Island Institute, Origami Whales Project, Whale and Dolphin Conservation, and the Whaleman Foundation, I submitted substantive comments, which identified a number of deficiencies, including legal and scientific inadequacies, in the government's analysis. See AWI Ex.1.¹ The decision-making process for the 2015 DEIS has not been completed.

7. The substantive comments submitted by AWI in response to the 2015 DEIS identify and articulate a number of deficiencies in the DEIS analysis (see AWI. Ex. 1). The comment letter provides compelling evidence on a number of issues and deficiencies in the analysis, including but not limited, the following: NMFS cannot meet the burden to issue an MMPA waiver to the Makah Tribe; 2015 DEIS fails to comply with NEPA; the Makah Tribe does not qualify for an ASW quota from the IWC; the tribe's treaty right to whale was abrogated by promulgation of the MMPA; NMFS must designate PCFG gray whales as a population stock under the MMPA; and the Makah Tribe's proposed method of hunting is inhumane. The comment letter also provides evidence that NMFS has failed to: consider a reasonable range of alternatives; disclose all relevant information or provide an accurate analysis of environmental impacts; define the impact levels used in its analysis; evaluate the impact of the proposed hunt on other federal land management agencies; adequately assess the hunt's impact on ENP, PCFG, and WNP gray whales; consider the impact of the hunt on other marine species and the local

¹ Exhibits to this testimony are labeled as "AWI Ex. X."

ecosystem; assess the impacts of the proposed hunt on economics, aesthetics, public safety; demonstrate the Makah Tribe's nutritional, subsistence, or cultural need to kill whales; evaluate the impact of consuming contaminated whale products on the health of the Makah people; consider the precedential impacts of the proposed hunt; and provide a meaningful analysis of the cumulative impacts of the proposed hunt.

8. From 2006 to the present, I have attended each meeting of the International Whaling Commission (IWC) as part of the AWI delegation. With the exception of 2006, I have also attended meetings of the IWC subcommittees, including its Aboriginal Subsistence Whaling (ASW) subcommittee. The United States originally obtained IWC approval for its requested ASW catch/strike limit or quota for gray whales to allocate to the Makah Tribe in 1997; and it has since sought and received IWC approval for its ASW quota in 2002, 2007, 2012, and 2018. In 2007 and 2018, I advocated against the U.S. quota request for gray whales on the grounds that the Makah did not qualify for an ASW quota from the IWC. At the 2012 meeting, I served as the non-governmental representative on the U.S. delegation to the IWC and, pursuant to delegation rules, was unable to advocate against a position of the U.S. government. For that meeting, other members of the AWI delegation advocated against the U.S. gray whale quota request for the Makah Tribe.
9. On April 5, 2019, NMFS published two notices related to this issue in the Federal Register. 84 Fed. Reg. 13639; 84 Fed. Reg. 13604. One notice announced the date of the administrative law hearing required by the MMPA given the preliminary proposal by NMFS to issue the requested MMPA waiver to the Makah Tribe (Notice of Hearing). 84

Fed. Reg. 13639. The second notice announced the availability of proposed regulations that would govern the taking of marine mammals and, specifically, gray whales by the Makah Tribe should the waiver be granted (Proposed Regulations). 84 Fed. Reg. 13604. Notably, the Makah Tribe only requested an MMPA waiver for ENP gray whales (84 Fed. Reg. 13604, 13639), which NMFS has preliminarily determined that it intends to issue. On that same day, I received an email from Mr. Michael Milstein of NMFS announcing its preliminary decision to issue the requested waiver and providing links to the Federal Register notices, declarations submitted by four NMFS employees in support of the NMFS decision, and other materials prepared by NMFS about Makah whaling.

10. Upon receipt of the email, I forwarded it to colleagues within AWI and to other organizations, including one outside the U.S. that had previously been involved in this issue to ensure that they were aware of the decision made by NMFS. I also downloaded the information accessible via the email sent by NMFS and began collecting additional information relevant to the issue and that I thought would be necessary to prepare informed and substantive direct, written testimony on this matter for submission to U.S. Coast Guard Administrative Law Judge George J. Jordan. I subsequently sought assistance from colleagues at AWI to conduct a literature search focused on relevant studies published since 2010 with an emphasis on those studies published from 2015 to the present. Although I already had in my possession a large number of studies related to this issue, this literature search was done to determine if any other or new studies had been published that I might not have previously obtained. I asked another colleague to research legal questions related to both NEPA and the ESA. I also participated in

several telephone/Skype calls with representatives from other organizations to discuss the decision made by NMFS, the administrative law hearing process, and to exchange information. I contacted representatives of NMFS to seek clarification about the administrative law hearing process, to raise concerns about the timing of the hearing and associated deadlines, and to seek additional information about Western North Pacific (WNP) gray whales and Pacific Coast Feeding Group (PCFG) gray whales. I also contacted two scientists who are experts on gray whales or Arctic marine ecosystem structure and ecology seeking information relevant to this matter.

11. On May 6, as directed by the notice announcing the hearing, I sent, by certified mail, a letter to Mr. Barry Thom of NMFS requesting that AWI be designated as a “party” for the purposes of the administrative law hearing. See docket entry 13 in this proceeding. On the same day, I sent a courtesy electronic copy of that letter to Mr. Thom and Mr. Steve Stone of NMFS.

12. On the same day, I submitted a request for records under the Freedom of Information Act to NMFS via FOIAonline.gov for records pertaining to: the preliminary decision made by NMFS to issue the requested waiver; the 2015 DEIS; correspondence between NMFS, the Makah Tribe, and other agencies; gray whale data collected by NMFS; and other records needed to adequately prepare substantive, written testimony for submission to Judge Jordan.² This request remains under review.

13. Also on May 6, I submitted, by electronic mail, a letter on behalf of AWI, the California Gray Whale Coalition, Cetacean Society International, Green Vegans-The New Human

² See Ex. 1 to Declaration of DJ Schubert on behalf of the Animal Welfare Institute in support of its Expedited Motion to Extend Waiver Proceeding Schedule, May 10, 2019.

Ecology, the International Marine Mammal Project of Earth Island Institute, Whale and Dolphin Conservation, and the Whaleman Foundation to Mr. Thom and Mr. Stone requesting that NMFS agree to work with Judge Jordan to extend the administrative law hearing schedule and associated deadlines by 90 days so as to provide all interested stakeholders, including AWI, with an adequate opportunity to prepare for the hearing and to prepare and submit substantive and informed written testimony to Judge Jordan.³ This request is warranted given, *inter alia*, the amount of information disclosed by NMFS in its expert declarations (approximately 4900 pages of material including new information, information previously not made available to the public, and various studies and reports); the pending FOIA request for records needed to properly prepare the written testimony; and the lack of any explanation from NMFS as to its need to expedite the decision-making process after a delay of 3.75 years between the close of the comment period on the 2015 DEIS and the April 4, 2019 announcement. AWI also supported its request for the extension by noting that the deadline for written testimony to be submitted to Judge Jordan (May 20) overlapped with the ongoing meeting of the IWC's Scientific Committee in Nairobi, Kenya (May 10-22). Many of the world's leading cetacean experts, including several gray whale experts, are participating in that meeting (a commitment that is very time consuming) and thus AWI's ability to prepare testimony and identify potential experts to prepare direct testimony has been severely hindered. This letter sought a response from NMFS by close of business on May 9, 2019.

³ See Ex. 2 to Declaration of DJ Schubert on behalf of the Animal Welfare Institute in support of its Expedited Motion to Extend Waiver Proceeding Schedule, May 10, 2019.

14. As requested, NMFS provided a response on May 9.⁴ Therein, NMFS suggested that AWI contact Judge Jordan, the presiding officer for the administrative law hearing, regarding its request for an extension in the hearing schedule and associated deadlines. Mr. Thom discounted AWI's concern about the lack of time to prepare for the hearing and to prepare the written testimony. On May 10, as suggested by NMFS, AWI filed an Expedited Motion to Extend Waiver Proceeding Schedule with Judge Jordan. The motion included two declarations from Dr. Rose and me. The motion identified several reasons to support an extension in the hearing schedule. NMFS filed its "Combined Response to the Animal Welfare Institute's and Sea Shepherd's Expedited Motions to Extend Waiver Proceeding Schedule" on May 12. The Makah Tribe also filed its "Response to Expedited Motions to Extend Waiver Proceeding Schedule" on the same date. On May 17, 2019 AWI filed its Combined Reply to NMFS's and the Makah Tribe's Responses to AWI's Expedited Motion to Extend the Waiver Proceeding Schedule. Due to the extreme prejudice in having to proceed so rapidly, the request remains pending notwithstanding the submission of this direct testimony, which is the best that AWI can do under the difficult circumstances imposed by NMFS. On May 20, 2019, Judge Jordan entered an order denying the two motions requesting an extension.

15. The remainder of this declaration is separated into six broad categories including: A) an analysis of the MMPA criteria for issuing a waiver in respect to ENP gray whales; B) the failure of NMFS to prepare supplemental NEPA analysis on its new Makah whaling alternative and to adequately consider other issues directed by the *Anderson* court in

⁴ See Ex. 3 to Declaration of DJ Schubert on behalf of the Animal Welfare Institute in support of its Expedited Motion to Extend Waiver Proceeding Schedule, May 10, 2019.

the 2015 DEIS, in any supplemental analysis, or in the Proposed Regulations; C) whether the Makah Tribe qualifies for an IWC catch limit or quota for the hunting of gray whales; D) a review of the proposed regulations; and E) a review of the preliminary list of issues of fact identified by NMFS for potential consideration at the administrative law hearing. Where appropriate and necessary I have cited to AWI's comments on the Draft EIS and the scientific literature, including new studies published since the deadline for public comment on the Draft EIS (July 31, 2015). All of the cited studies and other documents are submitted as exhibits to this declaration. I am not providing any rebuttal testimony in response to the four declarations filed by NMFS (i.e., Yates, Bettridge, Weller, and Moore) in this declaration but will do so by the date designated by Judge Jordan for submission of rebuttal testimony pursuant to 50 C.F.R. § 228.14(a).

NMFS cannot satisfy the criteria to issue the requested MMPA waiver:

16. NMFS has not made the necessary findings nor has it provided sufficient evidence that the proposed hunt of gray whales by the Makah Tribe qualifies for a waiver under the MMPA and, therefore, Judge Jordan should recommend against issuance of the waiver. NMFS has not demonstrated that the taking of ENP, WNP, and/or PCFG gray whales are consistent with sound principles of resource protection and conservation, that WNP and PCFG gray whales are not diminished below their optimum sustainable population, that their take would not harm the health and stability of the marine ecosystem, and/or that their killing and harassment would not be to their disadvantage.

17. In determining if an MMPA waiver should be issued, the Secretary (of Commerce) must consider the “distribution, abundance, breeding habits, and times and lines of migratory movements of such marine mammals,” 16 U.S.C. § 1371(a)(3)(A), and “must be assured that the taking of such marine mammals is in accord with sound principles of resource protection and conservation as provided in the purposes and policies of this chapter.”

Id. (emphasis added). In addition, NMFS must find “such taking will not be to the disadvantage of those species and population stocks.” *Id.* at § 1373(a). Furthermore, the finding made by NMFS must be in accordance with sections 1372, 1373, 1374, and 1381 of the MMPA.

18. The policies declared by Congress when promulgating the MMPA include:

(1) certain species and population stocks of marine mammals are, or may be, in danger

of extinction or depletion as a result of man's activities;

(2) such species and population stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in

the ecosystem of which they are a part, and, consistent with this major

objective, they should not be permitted to diminish below their optimum

sustainable population. Further measures should be immediately taken to

replenish any species or population stock which has already diminished below

that population. In particular, efforts should be made to protect essential

habitats, including the rookeries, mating grounds, and areas of similar

significance for each species of marine mammal from the adverse effect of man's actions;

(3) there is inadequate knowledge of the ecology and population dynamics of such marine mammals and of the factors which bear upon their ability to reproduce themselves successfully;

(4) negotiations should be undertaken immediately to encourage the development of international arrangements for research on, and conservation of, all marine mammals;

(5) marine mammals and marine mammal products either— (A) move in interstate commerce, or (B) affect the balance of marine ecosystems in a manner which is important to other animals and animal products which move in interstate commerce,

and that the protection and conservation of marine mammals and their habitats is therefore necessary to insure the continuing availability of those products which move in interstate commerce; and

(6) marine mammals have proven themselves to be resources of great international significance, esthetic and recreational as well as economic, and it is the sense of the Congress that they should be protected and encouraged to develop to the greatest extent feasible commensurate with sound policies of resource management and that the primary objective of their management should be to maintain the health and stability of the marine ecosystem.

Whenever consistent with this primary objective, it should be the goal to obtain

an optimum sustainable population keeping in mind the carrying capacity of the habitat. *Id.* at § 1361(1-6). (emphasis added).

To satisfy these policies, the Secretary must ensure, at a minimum, that the marine mammals in question are not “permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part and ... not be permitted to diminish below their optimum sustainable population.” *Id.* at § 1361(2). For those species or stocks that are already below their optimum sustainable population (OSP), the Secretary must endeavor to “protect essential habitats, ... mating grounds, and areas of similar significance for each species of marine mammal from the adverse effect of man's actions.” *Id.* OSP is defined as “with respect to any population stock, the number of animals which will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent element.” *Id.* at § 1362(9). The “maximum productivity” or “maximum net productivity” is defined as “the greatest net annual increment in population numbers or biomass resulting from additions to the population due to reproduction and/or growth less losses due to natural mortality.” *Id.* NMFS further defines this term in regulations implementing the MMPA to mean “a population size which falls within a range from the population level of a given species or stock which is the largest supportable within the ecosystem to the population level that results in the maximum net productivity level.” 50 CFR § 216.3. These same standards must be considered by Judge Jordan in making his recommendation to NMFS at the conclusion of the administrative law hearing process. In this case, given the small

numbers of WNP and PCFG gray whales, the potential to be killed during the proposed hunt, NMFS must not issue the requested waiver and Judge Jordan must not recommend that it do so.

Threats to gray whales and their habitat:

19. There are three separate groups of gray whales; ENP gray whales, WNP gray whales, and PCFG gray whales. Absent genetic testing, there is no way to positively distinguish between members of the three populations/groups. This is an important consideration in the context of the legality of issuing the requested MMPA waiver. Furthermore, NMFS has not adequately evaluated the threats to all gray whale groups in the context of potentially issuing the requested MMPA waiver.
20. The ENP gray whales current number approximately 26,960 (range of 24,420 to 29830 animals). 84 Fed. Reg. 13604, 13616 (citing Durban et al. 2017). Notably, this updated population estimate is contained in Carretta et al. (2018) (U.S. Pacific Draft Marine Mammal Stock Assessments: 2018) which has not yet been published as a final assessment meaning that the previous estimate of 20,990 is the current, official population estimate for ENP gray whales. The Potential Biological Removal (PBR) level, a measure used by NMFS to determine the maximum number of animals that can be removed, not including natural mortalities, from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. *Id.* at 13604, 13605. If there is no PBR for a stock then that stock, by definition, must be below its OSP.

21. ENP gray whales engage in one of the longest migrations of any species on the planet, traveling from their summer feeding area in the Arctic to their winter birthing areas in Mexico. Gray whales are primarily bottom feeders with their preferred prey being amphipods but they are capable of consuming a variety of prey species, largely invertebrates, found in the water column including mysids and ghost shrimp. The timing of the southbound migration of gray whales has changed over time as ocean warming has caused a loss in sea ice. Without sea ice as a barrier to northward migration, gray whales now migrate further north than they have in the past which has caused approximately a one week delay in their southbound migration (Rugh et al., 2001, AWI Ex. 2).
22. The delay in the start of the southbound migration has led to an increase in gray whale calf births during the southbound migration, including off the coast of central California (Shelden et al., 2004, AWI Ex.3), instead of in the more traditional birthing sites in the protected lagoons of the Pacific coast of Mexico. Giving birth in the open ocean during migration increases the threats to the gray whale calves due to predation and energetic costs associated with surviving in colder water and to complete the migration to Mexico. The energetic costs of survival and in responding to disturbance can adversely impacts gray whales (Villegas-Amtmann et al., 2015, AWI Ex. 4).
23. Other threats to gray whales include ship strikes, coastal development, ocean noise, disease, marine toxins and contaminants, climate change/ocean warming, and hunting by aboriginal subsistence whalers in Russia. See generally 2015 DEIS at 3.4.3.6.

24. In 1999 and 2000 gray whales experienced an Unusual Mortality Event (UME) during which a large number died primarily due to malnutrition (Gulland et al., 2005, AWI Ex. 5). As a result the gray whale population declined from over 20,000 animals to approximately 16,000. Many scientists suggested that the losses were due to the impact of ocean warming on the whales habitat (see below), particularly in their arctic summer feeding areas (see e.g., Le Boeuf et al., 2000, AWI Ex. 6).
25. In 2019 there is evidence of a potential new UME given a recent spike in reports of dead gray whales being found on beaches along the west coast of North America, reports of a disproportionate number of emaciated (“skinny”) whales, and an unusually low calf count in the Mexican lagoons and during the 2019 northbound migration. See AWI Ex. 7. Indeed, Urban et al. (2019) submitted a paper to the current IWC Scientific Committee meeting which reported that the 2019 winter season for gray whales in Mexico featured the late arrival of whales to two of the lagoons, small numbers of calves, and an increase in the percentage (23.6 (n=125)) of skinny, adult whales, which may be due to decreasing prey resources on the summer feeding grounds (SC/68a/CMP/12). Similarly, Ronzón-Contreras et al. (2019) report on an increase in the percentage of single whales in Laguna San Ignacio in poor condition documented in 2019; the highest rate seen in the past decade (SC/68a/CMP/13). The percentage of female gray whales with calves who were in good condition has plummeted in the past decade from 96.8 percent in 2010 to 43.8 percent in 2018 and 50 percent in 2019. The authors report that a decline in food availability for gray whales in their summer feeding grounds is becoming a problem as evidenced by the declining condition of the whales observed in 2019. Not

surprisingly, the decline in condition has led to an increase in dead gray whales and reduction in calf numbers in Laguna Ojo de Liebre and surrounding areas as reported in another 2019 IWC Scientific Committee report by Martínez-Aguilar and others (SC/68a/CMP/14). AWI is aware that citing to these papers is inconsistent with IWC guidelines (see IWC/67/FA/20). These guidelines note that Scientific Committee papers, which may be preliminary or exploratory, are not supposed to be cited outside the context of an IWC meeting until “the author (is notified) at least six weeks before it is cited to ensure that it has not been superseded or found to contain errors.” However, given the current deadline for written testimony, the overlap of this deadline with the IWC Scientific Committee Meeting, and since these papers are publicly accessible, AWI is referencing them in the text. AWI has elected not to provide a copy of these papers to the court as exhibits to this testimony at this time due to the IWC guidelines but it will provide a copy in the future.

26. As was the case 19 years ago, some scientists are claiming that this spike in deaths and evidence of skinny whales indicates that ENP gray whales have exceeded the carrying capacity of their habitat while others suggest that this is a result of changing ecosystem conditions in the arctic in response to ocean warming (see AWI Ex. 7). It is unlikely that the carrying capacity of gray whale habitat has increased in the past 19 years; if anything, it is more likely that it has decreased, given the myriad threats facing the species. Therefore the spikes in gray whales mortality are most likely tied to changing ecosystem conditions in their summer feeding areas linked to climate change. Carrying capacity can fluctuate as a result of natural and/or anthropogenic factors. If ENP gray

whales have met or exceeded the current carrying capacity of their arctic summer feeding areas, then this should be a red flag for NMFS to consider in its analysis of the appropriateness of issuing the requested MMPA waiver. This is particularly relevant, as the cause of the reduction in carrying capacity may primarily be linked to ocean warming associated with climate change, the impacts of which will escalate over time and be long-lasting if not permanent. NMFS is monitoring the current increase in dead gray whales (pers. comm. with Dr. Dave Weller), but it does not appear that NMFS has considered the impact of a potential second UME on its preliminary decision to issue the requested MMPA waiver, which would permit the intentional killing of gray whales while the impacts of a potential UME and/or the long-term impact of ecosystem regime shift in the Arctic remain unknown.

27. Ocean warming is fundamentally altering marine ecosystems, particularly in the Arctic. See generally Osborne et al., 2018, AWI Ex. 8; Hoegh-Guldberg and Bruno, 2010, AWI Ex. 9). To date it appears that gray whales have been able to adjust to these changes and may have benefited from a reduction in sea ice although it is unclear for how long these benefits will continue (Moore and Huntington, 2008, AWI Ex. 10). Ocean warming is causing ecosystem regime shift in the Arctic converting what were benthic ecosystems into pelagic ecosystems (Moore et al., 2003, AWI Ex. 11; Grebmeier et al., 2018, AWI Ex. 12; Grebmeier et al., 2006, AWI Ex. 13). In benthic ecosystems, the algae, zooplankton, phytoplankton, and other organic matter sinks to the sea floor to feed a diverse benthic community, including amphipods, the gray whale's preferred prey. As the ocean temperatures warm, fish are expanding their range to the north where they consume

the organic matter in the water column, thereby reducing the quantity available to the benthic organisms. As a result, the diversity, abundance, and composition of benthic communities in the Arctic, including amphipod population density and abundance, is declining (Grebmeier et al., 2018, AWI Ex. 12). This likely forces species, like the gray whale, which rely on those organisms for food, to pursue alternative prey items and/or to expand their range in search of prey. Grebmeier et al. (2018) found that:

The persistence of biological hotspots in the northern Bering and southern Chukchi Seas depends on reliable food supplies of spring ice algae and late spring/summer open water phytoplankton for the two areas to maintain their high benthic biomasses, which are in turn critical for migrating upper trophic level benthic consumers. The ongoing decline in seasonal sea ice cover and change in the timing of spring sea ice melt and associated ice edge production influence the timing of export production to the underlying benthos. Changing current speeds also influence where settling particulate organic carbon lands on the sediment and impacts benthic community composition. The biomass declines observed in the southern time series sites of the SLIP region, and changes from bivalves to polychaetes, are of concern because they can have consequences for the threatened status of the spectacled eider population. In the Chirikov Basin there has also been a contraction east and northward of the high biomass ampeliscid amphipod community, potentially affecting gray whale populations.

This is just one of many studies documenting ecosystem changes in the arctic linked to ocean warming which may have adverse impacts on gray whales and other marine species that use these areas in the long-term.

28. While the reduction in sea ice has provided gray whales with access to additional habitat allowing the species to expand its range to the north, its search for prey may be another factor triggering range expansion (Moore et al., 2003, AWI Ex.11). As filter feeders, gray whales generally consume only small fish opportunistically or incidentally preferring marine invertebrates as prey, such as amphipods, mysids, and ghost shrimp. Amphipods require a particular type of substrate to grow and survive. Their abundance, density, composition, and extent of their range in the Arctic have not been well studied through all portions of the Bering, Beaufort, Barents, and Chukchi seas. Over time, if ocean warming continues to alter ecological processes potentially reducing food supplies for gray whales, then these whales must either switch to alternative prey to meet their caloric needs or find additional populations of amphipods and other preferred prey as they expand their summer feeding range to the north. Absent such adjustments, gray whale population numbers may decline; a scenario that NMFS has not adequately considered in its current analysis.

29. Further south, scientists have been tracking a large warm water mass, referred to as “the blob,” since 2013. The blob, which varies in geographic extent, has had a dramatic and adverse impact on marine ecosystems (Cavole et al., 2016, AWI Ex. 14; Fisher et al., 2015, AWI Ex. 15). This has resulted in an increase in toxic algal blooms, a reduction in prey abundance particularly for cold water species, massive die-offs of seabirds,

reduction in marine invertebrate populations including as a consequence of low oxygen levels linked to the algal blooms, and increased mortality in whales, sea lions, otters, and walruses (Cavole et al., 2016, AWI Ex. 14; Frölicher and Laufkötter, 2018, AWI Ex. 16; Peterson et al., 2017, AWI Ex. 17; Zaba and Rudnick, 2016, AWI Ex. 18; Cartwright et al., 2019, AWI Ex. 19; Kovacs et al. 2011, AWI Ex. 20). This increased mortality is also as a result of these marine mammals consuming toxic algae and, for whales, due to an increase in encountering fishing gear as they pursue prey closer to shore (Welch 2016, AWI Ex. 21). At its peak, the blob stretched from Alaska to Mexico. Depending on the future of the blob, its geographic location and size, and the warmth of its waters, it could have adverse impacts on gray whales, including ENP and PCFG whales, by substantially reducing prey abundance and density it could also increase gray whale entanglement rates as they increasingly pursue prey in areas frequented by fishers. While PCFG gray whales affected by the blob would move (if they could) to other areas within the PCFG gray whale range, that loss of habitat would increase the density of PCFG gray whales in other areas putting greater pressure on local prey species. This could potentially trigger a domino effect that could diminish the number of PCFG gray whales. NMFS has not considered the impacts of the blob on gray whales, their habitat along the west coast of North America, or their prey species in its analysis.

30. The cumulative impacts of these threats – from ship strikes to climate change – have never been sufficiently evaluated by NMFS. In the 2015 DEIS, for example, NMFS relied on speculation and opinion without any substantive underlying analysis. In those instances where NMFS identifies current and future impacts, it does not take the next

step to assess the cumulative impact of such threats on gray whales and their habitat or, what analysis it does provide, is deficient. See AWI Ex. 1 at 116-127. NMFS authorizes dozens of projects or activities (including dock replacement, port repairs, dredging, sinking ships, seismic testing, and sonar use) each year throughout the U.S. portion of the gray whale migratory range for which a comprehensive cumulative impact analysis has not been done. The mere fact that, despite these threats, the ENP gray whale population has increased in number does not suggest that there have been no adverse effects associated with these threats, but only that there has apparently been no detectable population-wide impact to date. This ignores the possibility that there have been localized impacts and/or that, as the threats increase in number or severity, that the entire population may show signs of impacts. The current evidence of declining gray whale body conditions, an increase in gray whale mortality, ecosystem regime shift in the Arctic, and the expansion of the species summer feeding range to the north, may foreshadow more severe and broader impacts in the future.

WNP gray whales are not within their OSP and, therefore, an MMPA waiver cannot be issued:

31. WNP gray whales are primarily found in Russian waters in the vicinity of Sakhalin Island during the summer feeding season. WNP gray whales are designated by NMFS as a separate population stock and as depleted under the MMPA. They are also listed as “endangered” under the U.S. Endangered Species Act and as critically endangered on the International Union for Conservation of Nature Red List. NMFS currently estimates

that there are only 200 WNP gray whales one year of age or older (84 Fed. Reg. 13604, 13607 citing Cooke 2018).

32. As a result of the deployment of satellite tags on WNP gray whales it was discovered that some WNP gray whales migrate during the winter to the west coast of the United States to join ENP gray whales during their southbound migration (Mate et al., 2011, AWI Ex. 22). The 2015 DEIS reported 27 such incidents (2015 DEIS at 3-89), but the number of WNP whales who have been observed within the ENP gray whale range has increased to 54 in 2019. (Urban et al., 2019 (SC/68a/CMP/12)); as this paper was submitted to the 2019 IWC Scientific Committee meeting, AWI is not including a copy at this time as explained in this Declaration at ¶ 25). In the spring, WNP gray whales accompany ENP gray whales migrating north but, instead of continuing to Alaska and Chukotka, they return to the waters of the Sea of Okhotsk in Russia. At present, no WNP gray whales are tagged but scientists continue to utilize photo-identification of known WNP gray whales to document ongoing migration movements of WNP gray whales to the west coast of North America.

33. The PBR for WNP gray whales (based on the proportion of WNP gray whales that use U.S. waters and the length of time they are in U.S. waters) is 0.06 WNP gray whales per year, or approximately 1 whale every 17 years (Carretta et al., 2017). Unlike the ENP gray whales, which NMFS has determined since 2012 (84 Fed. Reg. 13604, 13607 citing Carretta et al., 2013) are within their OSP (when the population was estimated to contain 20,944 gray whales (Laake et al, 2012), NMFS does not provide such a finding for WNP gray whales. Considering that NMFS did not conclude that the ENP gray whales

were within OSP until the population was estimated to number 20,944 animals, it is improbable that WNP gray whales, at an estimated 200 animals, could be determined to be within OSP.

34. Indeed, given these circumstances the MMPA directs NMFS to consider taking immediate actions “to replenish any species or population stock which has already diminished below that population” (i.e., OSP). This could be accomplished through international agreements and cooperation with the Russian Federation but, at a minimum, it should include removing any intentional sources or mortality in U.S. waters – like the proposed Makah Tribe whale hunt.
35. Since WNP gray whales cannot be positively distinguished from ENP or PCFG gray whales except through genetic testing (thus making it impossible to identify an ENP, WNP, or PCFG gray whale before striking him or her with a harpoon), and considering that an increasing number of WNP gray whales have been documented off the west coast of North America and within the Mexican breeding lagoons over the years, there is a risk that the proposed hunt, particularly the even-year hunt, could result in the killing of a WNP gray whale. While it is known that WNP gray whales migrate to the west coast of North America, the actual number or proportion of WNP gray whales making that migration annually, their rate or pace of migration (southbound or northbound) particularly through the Makah U&A, and the amount of time these whales may spend within the proposed Makah gray whale hunting area are not known with certainty. While gray whale photo-identification work continues, not every gray whale is

photographed and, therefore, determining with precision the number of WNP gray whales along the west coast of North America is impossible.

36. NMFS estimates that, if the requested waiver is issued and the even-year/odd-year hunt structure is implemented, then “there is a six percent probability of hunters striking one WNP gray whale over the 10 years of the regulations” (84 Fed. Reg. 13604, 13615 citing Moore and Weller, 2018). AWI intends to provide a more detailed review of Moore and Weller (2018) in its rebuttal testimony but an initial review raises concerns about some of the parameters used in their model to determine the potential for a WNP gray whale to be killed during the proposed hunt. Furthermore, it is unclear what, if any temporal element (i.e., the time it takes WNP gray whales to transit the Makah U&A) Moore and Weller included in the model and whether they even considered the potential for migrating WNP gray whales, particularly during the northbound migration, to engage in any feeding activities during their return to Russian waters. The more time WNP gray whales spend in the Makah U&A during the even-year hunt the more the potential for their take or harassment by the proposed hunt would increase.

The Makah Tribe has not requested a waiver for the WNP gray whale population stock:

37. As noted previously, the Makah Tribe has only requested an MMPA waiver for ENP gray whales. The tribe did not request a waiver for WNP gray whales which would, if a WNP gray whale is taken as defined under the Endangered Species Act, violate the MMPA and ESA and lead to potential criminal charges against members of the Makah whaling crew responsible for the illegal take. Under the MMPA, the term “take” means to harass,

hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.”

16 U.S.C. § 1362(13). As such, all of the activities associated with the proposed hunt including striking a whale (ENP, WNP, and/or PCFG), unsuccessful strikes, training approaches, and training harpoon throws constitute a take as defined in the statute.

NMFS has failed to designate PCFG gray whales as a population stock or determined if they are within OSP and, therefore, cannot issued an MMPA waiver:

38. PCFG gray whales are a unique group containing an estimated 243 animals (84 Fed. Reg. 13604, 13607) who, unlike ENP gray whales, spend their summers in an area between northern California and northern Vancouver Island in Canada. To be counted as a PCFG gray whale the animals must be photo-identified within the region during the summer feeding period of June 1 to November 30 in two or more years. 84 Fed. Reg. 13604, 13607, 13619; 84 Fed. Reg. 13639, 13641. PCFG whales are genetically distinct from ENP and WNP gray whales. Within the summer range of PCFG gray whales there are additional, smaller geographic ranges including an area known as OR-SVI (Oregon-Southern Vancouver Island) and the Makah U&A. Photo-identification continues to be used as the primary tool to identify PCFG gray whales, track their movements, distributions, and to estimate their numbers. *Id.* at 84 Fed. Reg. 13641. While some PCFG gray whales travel throughout their full geographic range during the summer months, others demonstrate fidelity to certain areas (Lang et al., 2011, AWI Ex. 23). The best available scientific evidence indicates that the growth of this group of gray whales is likely through recruitment of gray whales born to PCFG whales given the close

associations between members of this group (Calambokidis and Perez, 2017, AWI Ex. 24.

The number of PCFG gray whales have either been stable since 2002 or have increased in recent years according to statements contained in the Proposed Regulations (see 84 Fed. Reg. 13604, 13607).

39. NMFS has failed to designate PCFG gray whales as a population stock under the MMPA despite evidence that such a designation is appropriate. See AWI Ex. 1 at 22-28. The MMPA defines “population stock” as “a group of marine mammals of the same species or smaller taxa in a common spatial arrangement that interbreed when mature.” 16 U.S.C. § 1362(11). According to NMFS guidance on this issue, a stock is deemed a management unit if it constitutes a “demographically isolated biological population,” a concept that NMFS has determined to be synonymous with “demographically independent biological population” in subsequent applications of the guidelines since “demographically independent” better reflects the intent of the MMPA. See AWI Ex. 1 at 24 (citing to GAMMS 2011; AWI Ex. 25). The definition of “demographic independence” is a situation where “the population dynamics of the affected group is more a consequence of births and deaths within the group (internal dynamics) rather than immigration or emigration (external dynamics).” See AWI Ex. 1 at 25 (citing to GAMMS 2011). This definition is important as it reveals that a lack of conclusive evidence as to the immigration or emigration rates or mechanisms does not disqualify a feeding aggregation of whales from being designated as a stock.
40. A variety of information can be used to identify a stock. This can include information about the prospective stocks such as: distribution and movements; population trends;

differences in morphology, life history, genetics, parasites, and oceanographic habitats; and contaminant and natural isotope loads (NMFS 2005). In the case of PCFG gray whales, although NMFS has not determined if they qualify as a population stock to date, there is compelling information supporting such a designation. For example, compelling evidence exists that there is a genetic substructure within the ENP population (2015 DEIS at 3-59, 3-94). Lang et al. (2011) (AWI Ex. 23), based on samples taken from PCFG gray whales and ENP gray whales on the northern feeding grounds, demonstrated small but statistically significant mitochondrial DNA differences demonstrating site fidelity to the southern feeding area. 2015 DEIS at 3-60. Although no significant differences in microsatellites (from nuclear DNA) were found between whales from the different areas, Lang et al. concluded that these results indicate “that structure is present among gray whales using different feeding areas, matrilineal fidelity plays a role in creating such structure, and individuals from different feeding areas may interbreed.” *Id.* (emphasis added). In a more recent paper, Lang et al. (2014) states that their “findings support recognition of the PCFG of gray whales as demographically independent based on the significant differences in mtDNA between the PCFG and whales feeding further north.” (emphasis added). Frasier et al. (2011) also concluded that PCFG gray whales likely mate with ENP whales. However, their findings that there were significant differences in mtDNA haplotype distribution and in estimates of long-term effective population size between PCFG and ENP whales were a result “of maternally directed site fidelity of whales to different feeding grounds.” (emphasis added). Despite NMFS’s reluctance to designate PCFG gray whales as a population stock under the MMPA, the

IWC Scientific Committee considers PCFG gray whales as a stock for its management purposes and analytical work. While NMFS does concede, that “the PCFG appears to be a feeding aggregation and may warrant consideration as a stock in the future,” 84 Fed. Reg. 13604, 13607, it claims that the evidence is currently equivocal on designating PCFG gray whales as a population stock under the MMPA. *Id.* Designating PCFG gray whales as a population stock could result in a finding of depleted status under the MMPA. If such a finding were made, NMFS would be unable to allow the issuance of any permit to the Makah Tribe to take a PCFG gray whale “except for scientific research purposes, photography for educational or commercial purposes, or enhancing the survival or recovery of a species or stock,” 16 U.S.C. § 1371(a)(3)(B), or for the incidental take in commercial fisheries. *Id.* at § 1371(a)(5)(A)(i). Even though PCFG gray whales are not a population stock, NMFS calculates a separate PBR for PCFG gray whales of 3.1 per year (based on a recovery factor of 0.5) (Carretta et al., 2017). NMFS has not determined if PCFG gray whales are within OSP. As noted in the preamble to the Proposed Regulations, “[I]t is unknown whether the PCFG, if it were eventually designated a stock, would be within OSP due to uncertainties in population parameters such as emigration and immigration rates, bycatch mortality, and recruitment (84 Fed. Reg. 13604, 13607 citing Punt and Moore, 2013).

41. The determination of whether PCFG gray whales constitute a population stock under the MMPA must be made before any determination should be rendered on whether the issuance of the requested MMPA waiver is consistent with the MMPA. In its comments on the 2015 DEIS, AWI explicitly requested that NMFS make this determination before

continuing with the present decision-making process; a request that NMFS ignored. The underlying conservation mandate of the MMPA and the precautionary principle (which basically promotes a cautionary approach to conservation decisions when there is the potential for harm and the scientific evidence is equivocal on cause and effect), require this stock designation matter to be concluded before this court should be expected to complete its role in this decision-making process since designating PCFG gray whales as a population stock would prevent issuance of the requested waiver since PCFG gray whales are not within OSP.

NMFS has failed to subject its new whaling alternative to supplemental NEPA analysis and has otherwise ignored requirements imposed by the Ninth Circuit's ruling in *Anderson*:

42. In the 2015 DEIS, NMFS evaluated six alternatives: Alternative 1 (No Action); Alternative 2 (Tribe's Proposed Action); Alternative 3 (Offshore Hunt), Alternative 4 (Summer/Fall Hunt), Alternative 5 (Split-season Hunt); Alternative 6 (Different Limits on Strikes and PCFG, and Limited Duration of Regulations and Permits. See generally 2015 DEIS Section 2. However, in the Proposed Regulations published on April 5, NMFS disclosed its selection of an entirely new alternative for Makah whaling that, to date, has not been subject to NEPA review. The first public mention and summary of this alternative was provided by the U.S. government to the IWC in May 2018. That summary was:

In 2018, the United States government requested that the Scientific Committee review a different and more conservative proposal that would further restrict

the number of strikes and landed whales to limit the hunt's potential impact on: (1) PCFG whales; and (2) Western Feeding Group (WFG) gray whales that migrate through the Tribe's hunting area but which feed at Sakhalin Island in the western Pacific Ocean. The new protections for these two groups of whales include alternating hunting seasons, with the hunt limited to the migratory season (when impacts on the PCFG would be minimized but western whales could be present) in even years and the feeding season (when PCFG whales would be present but western whales would not) in odd years. The new proposal would also limit the waiver's duration to ten years (rather than the unlimited duration proposed by the Tribe in 2005).

To further protect PCFG whales, under the new proposal the hunt could only occur in years in which the PCFG was above a minimum abundance threshold, only two whales could be struck and only one whale could be landed in a hunt during the feeding season (July 1 – October 30), only three whales could be struck in a hunt during the migratory season, and fixed limits for the total number of PCFG whales and PCFG females that could be killed over a ten-year period would be imposed. Each of these provisions is new and more restrictive than the Tribe's 2005 proposal.

The alternating season hunt and three strike limit during the migratory season would also provide further protections to any whales migrating to or from the

western North Pacific – those whales would not be vulnerable to the hunt in years in which the hunt was limited to the feeding season, and the three strike limit during the migratory season would further reduce the already very low chance that they would be struck during a migratory season hunt. In addition, if a western whale were struck during a migratory season hunt, such hunts would cease for the remainder of the 10-year waiver period. These provisions are also new and more restrictive than the Tribe's 2005 proposal.

The new proposal is more conservative than the Tribe's 2005 waiver application in order to reduce the already low probability of striking western whales and to further reduce the limited impacts to PCFG whales, while still providing annual (albeit very limited) hunting opportunities for the Tribe. The blend of traditional and modern methods (i.e., canoe, harpoon, chase boat, high-powered rifle, etc.) and the restriction to hunting in the Pacific Ocean remain the same as the Tribe proposed in 2005. The proposed hunt management was reviewed by the Rangewide Workshop and Scientific Committee in 2018 and was found to satisfy the IWC's conservation objectives for all affected populations of gray whales (eastern, western and PCFG). See Description of the USA Aboriginal Subsistence Hunt: Makah Tribe (<https://iwc.int/makah-tribe>).

The summary did not contain the level of detail as was contained in the Proposed Regulations and, since the Proposed Regulations were published eleven months after the summary of the new alternative was provided to the IWC, this would suggest that

NMFS may have still been contemplating the content of the new alternative. In any case, because NMFS has not subjected its new alternative to analysis in a supplemental NEPA document, the public has not had an opportunity to submit substantive and informed comment on that analysis.

43. NEPA requires federal agencies to evaluate the environmental impacts of proposed federal actions that may have a significant effect on the environment and make its evaluation available to the public “before decisions are made and before actions are taken.” 40 C.F.R. § 1500.1(b). For “major federal actions” (*Id.* at § 1508.18) with a significant impact on the human environment (*Id.* at 1508.27), this analysis is done in an Environmental Impact Statement (EIS). See generally *Id.* at § 1502.1 et seq. Actions with less significant impacts or when the agency is not sure an EIS is needed, an Environmental Assessment can be prepared. *Id.* at § 1501.3(a) and (b). When evaluating the environmental impacts of a proposed action, federal agencies must “rigorously explore and objectively evaluate all reasonable alternatives...” *Id.* at § 1502.14(a). Agencies are required to “prepare and circulate a revised drafts of the appropriate portion” of an EIS if the “draft statement is so inadequate as to preclude meaningful analysis.” *Id.* at 1502.9(a). Furthermore, agencies must “prepare supplements to either draft or final environmental impact statements” if “the agency makes substantial changes to the proposed action that are relevant to environmental concerns,” “there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts,” or “when the agency determines that the purposes of the Act will be furthered by doing so.” *Id.* at 1502.9(c)(1)(i and ii)

and (2). The development of an entirely new alternatives – as is the case here – meets the criteria for both preparing and circulating a revised draft of the DEIS containing the legally required analysis of the impacts of the new alternative or for the preparation of a supplemental EIS. In addition, since the deadline for public comments on the 2015 DEIS, significant new information has been published particularly in regard to the impact of ocean warming on arctic and other ecosystems that are relevant to the consideration and evaluation of impacts of the proposed hunt rendering stale the analysis in the 2015 DEIS. NMFS has not disclosed whether it has prepared any supplemental analysis, such as a Supplemental Information Report (SIR), given the new alternative for Makah whaling. A SIR is a “concise document that describes the decision-maker’s evaluation of new information, changed circumstances, or proposed changes to an action and assists the decision maker in determining and documenting whether a supplemental NEPA document is necessary.” (emphasis added) (see NOAA Policy and Procedures for Compliance with the National Environmental Policy Act at 5.C. (pages 7-8) (2017)).

44. The new alternative proposes an even-year, odd-year hunt structure to permit Makah whaling while ostensibly mitigating potential adverse impacts to WNP and PCFG gray whales. During an even-year hunt, the Makah will be permitted to hunt whales over six months (December (of the odd year) to May) while, in an odd year, hunting could occur over four months (July through October). However, beginning in July of the odd year, the new alternative would allow gray whales to be hunted for as many as 10 of the next 11 months. The number of strikes and unsuccessful strikes in an even-year hunt would be 3 and 18, respectively, (Proposed Regulation 50 C.F.R. § 216.113(a)(4)(ii) and

(a)(4)(iii) while, for an odd-year hunt, strikes and unsuccessful strikes would be limited to 2 and 12. *Id.* For training approaches and training throws (i.e., practice for whaling), the new alternative permits up to 353 approaches (including both hunting and training approaches) each calendar year with no more than 142 on PCFG whales. *Id.* at § 216.113(a)(4)(i) with training throws permitted anytime during even-year hunts but only from July through October in odd-year hunts. *Id.* at §216.113(a)(4)(ii). Each training throw will be counted as an unsuccessful strike. *Id.* The landing limits for gray whales are three in even-year hunts and one in odd-year hunts (*id.* at 216.113(a)(4)(v), with the caveat that if an WNP gray whale is killed, the hunt would be shut down for some period of time. 84 Fed. Reg. 13604, 13620. There is also a low abundance trigger for PCFG gray whales which, if met, would prevent whaling. *Id.* at 13604, 13608. Finally, three whales can be struck-and-lost in a calendar year. 50 C.F.R.at § 216.113(a)(4)(iv). While each of the alternative evaluated in the DEIS permit higher annual strike, struck-and-lost, and landing limits, none are similar in design or impact to the new alternative.

45. None of the six alternatives analyzed in the 2015 DEIS contemplated different standards for even-year versus odd-year hunts, none proposed a winter/spring and summer/fall hunt in the same calendar year, and none included the option of training approaches and training harpoon throws. Such changes in combination with new information relevant to the number of WNP gray whales migrating to the west coast of North America, ecosystem regime shift in the Arctic (Grebmeier et al., 2018, AWI Ex. 12), adverse impacts associated with ocean warming in the Pacific Ocean (Moore and Huntington 2003, AWI Ex. 10; Burek et al., 2008, AWI Ex. 26), and the ongoing and

increasing threats to gray whales throughout their migratory corridor merit an analysis of the environmental impacts of this new alternative in a supplemental EIS. At a minimum, NMFS must subject the new alternative to the same level of analysis as the six alternatives in the DEIS. Such a supplemental analysis is needed to satisfy the public participation requirements of NEPA.

NMFS has ignored explicit requirements imposed in *Anderson*:

46. The *Anderson* court held that NMFS could not approve the hunt in the absence of a waiver of the MMPA prohibitions on taking marine mammals (84 Fed. Reg. 13604, 13605). The court held that the Makah Tribe "... must comply with the process prescribed in the MMPA for authorizing a "take" because it is the procedure that ensures the Tribe's whaling will not frustrate the conservation goals of the MMPA." *Anderson* at 501. The court in *Anderson* also required NMFS to prepare an Environmental Impact Statement on the Makah Tribe's interest in whaling. In support of this finding, the court concluded that the proposed hunt would have uncertain and controversial impacts on the local gray whale population inhabiting waters within the Makah Tribe's usual and accustomed fishing/hunting area (Makah U&A) and that a decision to authorize the hunt would set precedent both within the IWC and nationally, possibly resulting in other tribal nations to seek similar opportunities to hunt whales consistent with their treaty rights to hunt and fish.
47. First, the court in *Anderson* requires an examination of the impact of the proposed hunt at a local level, stating that:

Even if the eastern Pacific gray whales overall or the smaller PCFG group of whales are not significantly impacted by the Makah Tribes' whaling, the summer whale population in the local Washington area may be significantly affected. Such local effects are a basis for a finding that there will be a significant impact from the Tribe's hunts. Thus, if there are substantial questions about the impact on the number of whales who frequent the Strait of Juan de Fuca and the Northwest Washington coast, an EIS must be prepared. 371 F.3d at 490.

In its 2005 waiver application, the Makah Tribe requested that NMFS engage in an analysis that considered the impact of the proposal hunt within the OR-SVI region within the range of the PCFG gray whales. In the 2015 DEIS, NMFS did evaluate the impacts of the hunt to PCFG gray whales throughout their range, including to PCFG gray whales within the OR-SVI region and the Makah U&A, but it did not consistently focus or apply the correct statistics to the PCFG gray whales within the OR-SVI and Makah U&A regions, particularly in its analysis of alternatives 3-6. See AWI Ex. 1 at 53-60.

Inexplicably, in the proposed regulations, NMFS defines the geographic area of its analysis as the northern California Current ecosystem which stretches from northern California to Vancouver Island for the purpose of determining if the proposed hunt would affect the role of gray whales in the ecosystem as required by the MMPA. This is one of the prerequisites for issuing the requested MMPA waiver. Considering that those PCFG gray whales that inhabit the northern California Current ecosystem outside of the Makah U&A in the spring, summer, and fall will not be targeted in the hunt, it is farcical to use that larger range for the purpose of determining the hunts' potential

impact on the role of gray whales in the ecosystem. Instead, NMFS should have used the Makah U&A, where the proposed hunt would occur, as the basis for its analysis.

48. Second, the *Anderson* court requires NMFS to examine the precedential effect of its decision, explicitly noting that:

The 1997 IWC gray whale quota, as implemented domestically by the United States, could be used as a precedent for other countries to declare the subsistence need of their own aboriginal groups, thereby making it easier for such groups to gain approval for whaling. If such an increase in whaling occurs, there will obviously be a significant impact on the environment. *Anderson* at 493.

In addition, in the context of the MMPA's conservation mandate, the court also noted that:

If the MMPA's conservation purpose were forced to yield to the Makah Tribe's treaty rights, other tribes could also claim the right to hunt marine mammals without complying with the MMPA. While defendants argue that the Makah Tribe is the only tribe in the United States with a treaty right expressly guaranteeing the right to whale, that argument ignores the fact that whale hunting could be protected under less specific treaty language. The EA prepared by the federal defendants notes that other Pacific Coast tribes that once hunted whales have reserved traditional "hunting and fishing" rights in their treaties. These less specific "hunting and fishing" rights might be urged to cover a hunt for

marine mammals. Although such mammals might not be the subject of "fishing," there is little doubt they are "hunted." *Anderson* at 499.

While the potential for other tribes to use NMFS authorization for Makah whaling to support a similar request to NMFS was not used in *Anderson* to support the finding of potential precedential effects of the decision, it is applicable to defining the precedent that may be set by this decision. Nevertheless, NMFS dismissed the court's concern about precedential impact by claiming in the DEIS that there was no significant increase in aboriginal subsistence kills following the IWC's initial approval of the U.S. request for a quota for the Makah in 1997 and there have been no requests by additional aboriginal subsistence whaling countries for quotas from the IWC. 2015 DEIS at 4-269.

Consequently, NMFS concluded that "we consider it unlikely that authorization of a Makah whale hunt under Alternatives 2 through 6 would change the international regulatory landscape for aboriginal subsistence whaling or lead to the increased harvest of whales in aboriginal subsistence whale hunts." *Id.* at 4-270. In 2018, however, the *Anderson* court's prediction that other tribes with hunting and fishing rights may also qualify to whale was borne out in when the same court found, in *Makah Indian Tribe v. Quileute*, 873 F.3d 1157 (9th Cir. 2017) cert. denied, 139 S.Ct. 106 (2018), that:

Based on the considerable evidence submitted throughout the lengthy trial, the district court's finding that the Quileute and Quinault intended the Treaty's "right of taking fish" to include whales and seals was neither illogical, implausible, nor contrary to the record. We conclude that the district court

properly looked to the tribes' evidence of taking whales and seals to establish the U&A for the Quileute and the Quinault and did not err in its interpretation of the Treaty of Olympia. *Makah Indian Tribe v. Quileute* at 22.

While this particular ruling was limited to the Quileute and Quinault tribes, there is no reason why those tribes and other coastal tribes anywhere in the United States who have a treaty right to hunt or fish could not seek the authority to engage in whaling based on the precedent that could be set if the MMPA waiver is granted and NMFS authorizes the Makah Tribe to hunt gray whales. While the ruling in *Makah Indian Tribe* was published well after the deadline for public comments on the DEIS, AWI is aware of no new analysis of the precedential impact of the current decision conducted by NMFS in response to *Makah Indian Tribe*.

The Makah Tribe does not qualify for an ASW quota from the IWC:

49. The U.S. delegation to the IWC, led by NMFS, has sought IWC approval for a quota of gray whales for the Makah Tribe on six different occasions. In 1996, the first attempt by the U.S. government to secure the quota, the request was withdrawn due to a lack of support by IWC member countries many of whom questioned whether the Makah qualified for an aboriginal subsistence whaling (ASW) quota. The U.S. sought the quota again in 1997 and, while we are aware that the IWC approved the U.S. request that year and four additional times, we have never concurred with this decision by the IWC because the Makah fail to qualify for a quota and since the U.S. government could not

allocate the quota to the Makah Tribe pending compliance with domestic legal requirements as mandated by the Ninth Circuit's ruling in *Anderson v. Evans*.

50. Notwithstanding the IWC's approval for the gray whale quota, it is clear that the Makah Tribe does not qualify for a quota based on the relevant IWC definitions and U.S. law. See AWI Ex. 1 at 8-13. The IWC defines "aboriginal subsistence whaling" as "whaling for purposes of local aboriginal consumption carried out by or on behalf of aboriginal, indigenous, or native people who share strong community, familial, social, and cultural ties related to a continuing traditional dependence on whaling and the use of whales." In addition, "local aboriginal consumption" refers to the "traditional uses of whale products by local aboriginal, indigenous, or native communities in meeting their nutritional, subsistence, and cultural requirements." These definitions were developed in 1981 by an Ad Hoc Technical Working Group on Development of Management Principles and Guidelines for Subsistence Catches of Whales by Indigenous People, have been used by the IWC for nearly forty years, and are routinely cited by NMFS. Based on these definitions, to qualify for an ASW quota, an aboriginal group must have "a continuing traditional dependence on whaling and the use of whales" and must have a "nutritional, subsistence, and cultural" need (emphasis added). The IWC does not define "whaling" but it is defined in the U.S. Whaling Convention Act as "the scouting for, hunting, killing, taking, towing, holding onto, and flensing of whales, and the possession, treatment, or processing of whales or of whale products." 16 U.S.C. § 916(j).
51. The Makah Tribe is unable to meet the definition of "aboriginal subsistence whaling" or "local aboriginal consumption" because the tribe has no "continuing traditional

dependence on whaling and the use of whales” and it does not have a “nutritional, subsistence, and cultural” need for whales or whale products. With the exception of a single whale killed legally in 1999 and another killed illegally in 2007, the last whale killed by the Makah Tribe was in 1927 and the last time the Makah regularly engaged in whaling was probably before 1870. 2015 DEIS at 3-302. The Makah Tribe gave up whaling in the late 1920s for several reasons including because of the small number of gray whales surviving after massive commercial whaling of the species but, more importantly, because sealing was more profitable. The Makah were expert seafarers and skilled hunters and were in high demand to work on sealing vessels and, in time, some Makah purchased and operated their own sealing vessels. 2015 DEIS, Appendix A (Whale Hunting and the Makah Tribe: A Needs Statement) at 20 within Appendix A (Application for a waiver of the Marine Mammal Protection Act take moratorium to exercise gray whale hunting rights secured in the treaty of Neah Bay). Notably, the Makah Tribe also cannot satisfy the definitions of “subsistence” or “subsistence uses” as contained in regulations implementing the MMPA (see 50 C.F.R. § 216.4) since “subsistence” only applies to “the use of marine mammals taken by Alaskan natives...” and “subsistence uses” pertains only to the “customary and traditional uses of fur seals taken by Pribilovians”

52. Regardless of why the tribe stopped whaling, it did stop for at least 72 years (until 1999). As a consequence, the Makah Tribe cannot demonstrate a “continuing traditional dependence on whaling and the use of whales” nor can it demonstrate a “nutritional, subsistence, and cultural need for whales and whale products. The Makah Tribe claims

that its cultural connection to whales has continued over time through family stories, traditions, and secrets. 2015 DEIS, Appendix 2 at 8 (Application for a waiver of the Marine Mammal Protection Act take moratorium to exercise gray whale hunting rights secured in the treaty of Neah Bay). However, any continued cultural connection to whales by some Makah families does not constitute “whaling” as defined under the WCA and, therefore, does not meet the relevant IWC definitions. IWC member countries did not and were not obligated to consider U.S. law in approving previous gray whale quota requests for the Makah Tribe and the U.S. government did not advise them of the U.S. law and ignored the law itself in seeking approval for the quota.

53. Absent a credible explanation by NMFS as to how the Makah Tribe’s cultural connection to whaling satisfies the IWC definitions given the definition of “whaling” under U.S. law and how the Makah qualify for subsistence as defined in the MMPA, the Makah Tribe does not qualify for an IWC ASW quota and any such quota approved by the IWC must not be allocated by NMFS to the Makah.

The Proposed Regulations are not clear and contain misleading, confusing, and contradictory information:

54. In addition to its preliminary determination to issue the requested MMPA waiver to the Makah tribe, NMFS also published Proposed Regulations which are intended to govern the take of ENP gray whales by the Makah Tribe if the hunt is authorized. As noted previously, the Proposed Regulation constitutes the first time that NMFS has disclosed the structure and details of its new alternative for Makah whaling. It had previously

provided a summary of the new alternative in a description of the Makah hunt submitted to the IWC in May of 2018 but that summary lacked most of the details that are contained in the proposed regulations. AWI has concerns about the proposed regulations and/or seeks clarification on the intent, content, and/or interpretation of some of the regulations as summarized below.

55. The proposed regulation includes a definition of “hunt” and “hunting” (Proposed Regulations 50 C.F.R. § 216.112) but does not include a definition of “whaling.” “Whaling,” as noted previously, is defined under the Whaling Convention Act and must apply to the proposed hunt. NMFS should explain why it elected to include a definition in the Proposed Regulations for “hunt” and “hunting” while seemingly ignoring an existing definition of “whaling.”
56. The proposed regulation also includes a definition of “land” and “landing” (Proposed Regulations 50 C.F.R. § 216.112) but NMFS fails to provide any explanation in the regulatory text or the preambulatory text whether it will impose any restrictions on where the Makah can land a dead whale including whether it will be permitted to land a dead whales on land under the jurisdiction of the National Park Service, U.S. Fish and Wildlife Service, the Olympic Coast National Marine Sanctuary, state owned land, private land, or land under the jurisdiction of other sovereign tribal governments.
57. The definition of “Makah Indian handicrafts” in the proposed regulation includes a requirement that such handicrafts must be “significantly altered” from their natural form (Proposed Regulations 50 C.F.R. § 216.112) but NMFS has not provided a definition of “significantly altered.” Such a definition should be included to avoid any question or

misinterpretation of what constitutes the significant alteration of a non-edible gray whale product to qualify it as a handicraft under the proposed regulations.

58. The definition of “strike” or “struck” includes reference to “a harpoon or other device” (Proposed Regulations 50 C.F.R. § 216.112) but NMFS has not included an explanation or definition of what constitutes an “other device.” This should be clarified so as to avoid any confusion caused by the use of such a vague term.
59. The Proposed Regulations permit a certain number of strikes, unsuccessful strikes, struck-and-lost whales, landed whales, and training approaches. Proposed Regulations 50 C.F.R. § 216.113(a)(4)(i-v). The reporting requirements included in the proposed regulations require the Makah Tribe to submit various reports providing these data (*Id.* at § 216.117 et seq.) but it is unclear what mechanisms NMFS will employ to ensure the veracity of the reported data. While the proposed regulations reference hunt observers, *Id.* at § 216.113(a)(5), it is not clear if there will be an independent hunt observer available during each hunt and, if more than one Makah whaling crew is whaling at the same time, if NMFS intends for each hunt to be observed by an independent monitor. NMFS also doesn’t disclose if it intends for every hunt to include an independent observers or if only a proportion of the hunts will be subject to observation. Furthermore, NMFS does not disclose if the data collected by any hunt observers are submitted to the NMFS, the Makah Tribe and NMFS, or just to the Makah Tribe and/or how any potential discrepancy between the hunt observer data and data submitted by the Makah Tribe would be resolved.

60. The inclusion of training approaches and training harpoon throws in the Proposed Regulations represents the potential for additional harassment of affected gray whales. These activities constitute a direct take, as take is defined under the MMPA, of gray whales as they will cause the harassment of the species. Furthermore, although the U.S. government, by securing aboriginal whaling subsistence catch limits from the IWC must believe that the Makah have a “continuing traditional dependence on whaling and the use of whales” so as to qualify for an IWC approved quota, it fails to explain why it needs to permit any training approaches and/or training harpoon throws. The native whalers in Alaska do not engage in hunting approaches or training harpoon throws for practicing whaling (and may not even be authorized to do so) so it is unclear why the Makah should be afforded those opportunities, which as articulated in the proposed regulations, can occur year round for hunting approaches and year round during even-year hunting or only from July through October during odd-year hunts for training harpoon throws. If the Makah Tribe had an actual “continuing traditional dependence on whaling,” it wouldn’t need to engage in practice to approach and kill whales.

61. The proposed regulation indicates that, in an even year hunt, “no more than one strike may be authorized within the 24-hour period commencing at the time of strike.” Proposed Regulation 50 C.F.R. § 216.113(a)(4)(iii). A strike is defined in the proposed regulations as “to cause a harpoon or other device to penetrate a gray whale’s skin or an instance in which a gray whale’s skin is penetrated by a harpoon or other device while hunting.” Proposed Regulation 50 C.F.R. § 216.112. In the event that the first strike is not fatal, this proposed regulation would prohibit any additional strikes within

24 hours thereby permitting a wounded whale to suffer immeasurably before any additional strikes would be allowed to end his or her suffering. NMFS should clarify if this was the intended effect of his particular proposed rule and/or amend and clarify the text to ensure that wounded whales can be quickly killed even if it requires additional strikes within the 24 hour period after the initial strike. This also seems to conflict with the Proposed Regulations which prohibit hunting “outside the geographic areas identified in § 216.113(a)(6)(iii), unless in pursuit of a gray whale that has already been struck within that area.” 50 C.F.R. § 216.115(a)(7). If this scenario were to occur during an even-year hunt when the Makah Tribe is not allow to deliver a second strike to a whale until 24 hours after the first strike, then this prohibition would suggest that the Makah could only pursue the whale, not strike it again until the 24 hour period had expired.

62. The definition of “strike” raises additional concerns. For example, the purpose of establishing a minimum of 24 hours between strikes during an even-year hunt is to determine if the struck whale is a WNP gray whale. 84 Fed. Reg. 13604, 13608. Unless photographs or genetic samples are obtained from the whale before he or she is struck, it is unclear if such samples can be secured after a strike if the strike is not lethal if the whale is fleeing from the attack. Furthermore, if the Makah, NMFS hunt observers, or any scientists are participating in the hunt for the purpose of securing a genetic sample using a crossbow or “other device” to obtain a tissue sample from the targeted whale, that should also count as a strike under the current definition.

63. Furthermore, if the Makah Tribe is limited to three strikes during an even-year hunt and two strikes during an odd-year hunt (50 C.F.R. § 216.113(a)(4)(iii)), it would appear that the Makah could use up or even exceed its seasonal hunt strike limit on a single whale. Considering that the current method of hunting described in the 2015 DEIS includes the use of a harpoon followed by shooting the whale with a 50 caliber bullet, (see e.g., 2015 DEIS at 2-13), a minimum of two strikes will be required for each whale hunted. If the two strikes were not sufficient to kill the whale then a third or more strikes would be required which could quickly surpass the seasonal hunt limit and place the Makah Tribe in violation of the regulation. Alternatively, if the Makah chose not to exceed its seasonal hunt strike limit then the struck, but not dead, animal may suffer immeasurably which would be in violation of the humane killing requirement of the MMPA. 16 U.S.C. § 1374(b)(2)(B).

64. The struck-and-lost and landing limits for gray whales in the Proposed Regulations also appear to be inconsistent with the strike limits as “strike” is defined in the Proposed Regulations. The Proposed Regulations limit the number of struck-and-lost whales to three per calendar year. Proposed Regulation 50 C.F.R. § 216.113(a)(4)(iv). If the Makah hunting method requires a minimum of two strikes to kill a whale, then if the tribe were to meet this struck-and-lost limit, it would have expended at least six strikes in excess to the strike limits for the seasonal hunts. The gray whale landing limits is no more than three whales in an even-year hunt and no more than one whale in an odd-year hunt. *Id.* at 216.113(a)(4)(v). In an even-year hunt, if the Makah landed the maximum number of

whales allowed by the Proposed Regulations, it would have used a minimum of six strikes, well in excess of the three strike limit for even-year hunts.

65. If the definition of “strike” and interpretation of strike limits in the Proposed Regulations are consistent with the intent of NMFS, then it must explain what provisions are in place to: permit a whale struck and wounded during an even-year hunt to be struck again until he or she is put out of his or her misery despite the 24-hour waiting period before delivering a second strike or to permit the Makah to exceed its seasonal hunt strike limit if or when necessary to end the suffering of a wounded whale. On the other hand, if the definition of “strike” and interpretation of strike limits in the Proposed Regulations are not consistent with the intent of NMFS then, considering the importance of this matter in determining the impacts of the hunt on gray whales, including to the well-being of individual whales, it must publish revised Proposed Regulations in the Federal Register and provide a new opportunity for the submission of direct, written testimony to Judge Jordan and reschedule the hearing date.
66. The Proposed Regulations identify low abundance triggers for PCFG gray whales below which any planned hunt will not be authorized. The triggers include an actual or projected count of PCFG gray whales of less than 192 animals or if the associated minimum population estimate is less than, or projected to be less than, 171 animals. Proposed Regulation 50 C.F.R. § 216.113(a)(4)(vi)(A) and (B). If the second trigger of 171 animals is the minimum population estimate calculated from the higher trigger of 192, it is not clear why the lower trigger is even necessary. In addition, NMFS has not provided an explanation as to its selection of 192 as a low abundance trigger for PCFG gray

whales versus, for example, selecting a higher number which would be more conservative and precautionary by preventing authorization of a hunt if the number of PCFG gray whales falls below the higher starting number. Considering that the current estimate for the number of PCFG gray whales is only 243 animals (84 Fed. Reg. 1604,13607) and that this group of whales warrants designation as a population stock under the MMPA, a more precautionary approach to the management of any hunt that will kill PCFG gray whales (e.g., odd-year hunts) or may kill gray whales (e.g., even-year hunts) would be advisable.

67. To increase protections for WNP gray whales from being taken in a Makah hunt, the Proposed Regulations specify that that tribe will be required to cease whaling for the duration of the permit if NMFS determines that a WNP has been killed “unless and until the Regional Administrator determines that measures have been taken to ensure no additional WNP gray whales are struck during the duration of the permit.” Proposed Regulation 50 C.F.R. § 216.113(a)(4)(vii). Under the new bifurcated hunt structure, WNP should only be susceptible to being killed during an even-year hunt where NMFS has included a 24-hour waiting period between strikes for the purpose of determining if a struck whale is a WNP gray whale. The methodology for making this determination is not disclosed. For example, it is not clear if a Makah whaling crew will be required to photograph or obtain a tissue sample from a whale (for photographic-identification purposes) during an even-year hunt before the whale is struck with a harpoon or other device for the purpose of taking the whale. While Makah tribal hunt observers, NMFS observers, and other members of the Makah Tribe are authorized to collect

photographs, video footage, and samples from gray whales (Proposed Regulation 50 C.F.R. § 216.113(a)(5), there's no indication if such images and samples are to be taken before a strike, after a strike, or when the whale is dead. Nor does NMFS specify what, if any, training would be required to ensure those permitted to collect such images and samples are capable of doing so in a manner which ensures that the collected information is usable. If there is no requirement for obtaining such images or samples pre-hunt or pre-strike, it is unclear if a struck but not killed whale can be subsequently sampled or photographed to determine the classification of the targeted whale. In the event that the whale is struck (as the term is defined in the Proposed Regulation) but the harpoon or other device dislodges from the animal and it flees, absent a requirement for pre-strike photographs or tissue samples, it is similarly unclear how NMFS will determine if that struck-and-lost whale is a WNP gray whale. An explanation of the methodology to obtain samples or photographs of any whale targeted during an even-year hunt should be provided by NMFS.

68. One of the many terms and conditions for the hunt permit is to include information about "the area where hunts, hunting approaches, training approaches, and training harpoon throws are allowed..." Proposed Regulation 50 CFR § 216.113(a)(6)(iii) (84 Fed. Reg. 13604, 13620). The Proposed Regulation do not specify what, if any, restrictions will be imposed on where the Makah will be permitted to land killed whales. Nor is such information required to be included in the hunt permit. This is important due to the different land jurisdictions within and outside the Makah U&A which include: Makah tribal lands; lands under the jurisdiction of the National Park Service, U.S. Fish and

Wildlife Service, and Olympic Coast National Marine Sanctuary. For the federal agencies, even if they were to permit the Makah Tribe to land dead whales on their lands, they may need to amend existing management plan, adopt park or refuge-specific regulations, and/or assess the environmental impacts of permitting the Makah Tribe to land dead gray whales under NEPA.

69. Before issuing a hunt permit, the Regional Administrator must make several findings including that “the authorized method of hunting is humane.” Proposed Regulation 50 C.F.R. § 216.113(a)(7)(i). NMFS notes in the preambulatory text to the Proposed Regulations that this determination will be made during the hunt permit process but it fails to explain why the permitted method of hunting should not promulgated by regulation. While there may be value in addressing the method of hunting through the hunt permit process, NMFS should, at a minimum, explain why it has elected to use the hunt permit process to assess the humaneness of the method of hunting proposed by the Makah Tribe. Furthermore, since the MMPA requires that the take of any marine mammal be humane, (16 U.S.C. § 1374(b)(2)(B), NMFS must disclose what criteria it intends to use to assess the humaneness of the hunt methods.

70. A fundamental problem with the Proposed Regulations governing the use, sale, barter, trade, consumption, possession, transport of edible and non-edible products (see Proposed Regulations 50 C.F.R. § 216.113(b)(1) from killed gray whales is enforcement. For example, the Proposed Regulations permit enrolled members of the Makah Tribe to “share and barter” edible whale products with other enrolled members of the tribe both within and outside the Makah Tribe’s reservation, but NMFS fails to explain who will

ensure that enrolled members do not “share and barter” edible whale products with non-enrolled members outside the reservation. Or, if whale meat is shared with a non-member within the reservation, who will ensure that the meat is not transported off the reservation? Since the Proposed Regulations permit the Makah Tribe to share a restricted amount (only two pounds per person) of edible whale products with any person attending a tribal or intertribal gathering sanctioned by the Makah Tribal Council, who will ensure that the authorized pounds of whale meat per person is not exceeded? The Proposed Regulations specify that the “Makah Indian Tribe is responsible for managing all activities of any Makah Indian tribal member carried out under this section,” *id.* at (2)(v), but it does not indicate who will enforce the regulations against persons not enrolled as members of the Makah Tribe.

71. For non-edible whale products (50 C.F.R. § 216.311(b)(2)), who will ensure that non-edible whale products that have not been fashioned into Makah handicrafts or such handicrafts “that have not been marked or certificated” will not be sold either inside or outside the reservation? Similarly, who will ensure the non-enrolled members of the tribe while within the reservation who obtain marked and certificated Makah handicrafts through sale or barter, only obtain said products from an enrolled tribal member? For Makah handicrafts that are marked and certificated, can a non-enrolled member of the Makah Tribe who barter to obtain such handicrafts subsequently sell the products for commercial profit and can large quantities of such handicrafts be purchased wholesale and then resold via a retail establishment? What mechanisms will be established to ensure that any marked and certificated Makah handicrafts sold in

interstate commerce are not transited through a foreign country (i.e., Canada, if such handicrafts are sold in interstate commerce between the lower 48 states and Alaska)? Furthermore, is the international sale of marked and certificated Makah handicrafts entirely prohibited? If so, who will ensure that such international sales do not occur? Or, if not, what permits would have to be obtained to transport, ship, trade, or sell such handicrafts to an international buyer? The Proposed Regulations are, as written, entirely devoid of answers to these and other questions related to enforcement of the possession, sale, trade, barter, transport, and possession of both edible and non-edible products originating from a Makah whale hunting including Makah handicrafts.

72. The lack of a clear enforcement mechanism is also relevant to the prohibited acts section of the Proposed Regulations. Proposed Regulations 50 C.F.R. § 216.115. NMFS does not specify who or how the prohibitions contained in the Proposed Regulations will be enforced.

73. The Proposed Regulations require the NMFS Regional Administrator to provide information to the Makah Tribe regarding the number of PCFG gray whales and the proportion of gray whales in the hunt area that are presumed to be PCFG gray whales and, for each month, the proportion of PCFG gray whales presumed to be female. Proposed Regulation 50 C.F.R. § 216.114(a)(1) and (2). In providing the proportional data for PCFG gray whales, the Regional Administrator must base his/her findings on the “best available evidence” (*Id.* at 216.114(a)(2)), but the data quality standard for providing overall PCFG abundance numbers is not stated. NMFS should explicitly state that this latter standard must also be based on the best available evidence. In addition,

NMFS must clarify what “best available evidence” it will use to provide the PCFG gray whale proportional data to the Makah Tribe, how, where, and when that data is collected (presumably from photographic-identification work), and, most importantly, how the data will be interpreted to provide accurate proportional data to the Makah Tribe. Photographic-identification surveys for gray whales are not conducted year-round and, therefore, it is not clear in the Proposed Regulations what data NMFS will rely on to determine the proportion of PCFG gray whales, particularly for the even-year hunts (December through June) within the hunt area and, for those same months, the proportion of females by month in the hunt area. The model or methodology for making such determinations must be disclosed.

74. The Regional Administrator, again based on the best available evidence, must also notify the Makah Tribe if a whale struck “in an even-year hunt is a WNP gray whale or a PCFG whale or neither, or cannot be identified due to a lack of photographic or genetic data useful for making identification.” Proposed Regulation 50 C.F.R. § 216.114(b)(1). A similar requirement is included for odd-year hunts. *Id.* at 216.114(b)(2). For even-year hunts, any struck whale that can’t be identified will be counted as a PCFG gray whale while, in odd-year hunt, any struck whale that cannot be identified as a WNP gray whale will be counted as a PCFG gray whale. NMFS fails to explain why it will designate struck but unidentified whales as PCFG gray whales versus, taking a more precautionary approach, by considering such whales to be WNP gray whales. By counting such whales as WNP gray whales, NMFS would be increasing the protections afforded to this endangered stock of gray whales while incentivizing those engaged in the hunt to

ensure that a struck whale is killed and landed and that appropriate images or samples are obtained to increase the likelihood of positive identification. Alternatively, as NMFS has done with PCFG gray whales, it could consider developing a proportional system to ensure that struck whales, particularly those struck during an even-year hunt, who cannot be identified are counted as PCFG and WNP gray whales based on proportion of such whales in the hunt area based on the best available evidence.

75. The monitoring, reporting, and record keeping requirements contained in the Proposed Regulations include a requirement that a “certified tribal hunt observer” accompany each hunt to record information about each hunt. Proposed Regulations 50 C.F.R. § 216.117(a)(1). One such determination to be made by this person is whether a struck whale who is not landed “suffered a wound that might be fatal.” *Id.* NMFS does not disclose what type of training such tribal hunt observers will need to take in order to make such a determination about the severity of a wound and whether that wound would be fatal. This should be clarified. It is also unclear why NMFS proposes to require the Makah Tribe to include time to death data in its incident reports (*Id.* at §216.117(a)(6)(ii)(B)), but does not require time to death information to be contained in the after season hunt reports. *Id.* at § 216.117(a)(6)(iii)(C).

76. As noted in the Proposed Regulations, upon receipt of an incident report documenting that eight gray whales have been struck, the Regional Administrator must evaluate the photo-identification survey efforts and “the level of certainty associated with identifying cataloged WNP gray whales and PCFG whales,” *Id.* at § 216.117(b)(1) and the humaneness of the hunt. *Id.* at 216.117(b)(2). The assessment of humaneness requires

the convening of experts, including a veterinarian, marine mammal biologist, and tribal and NMFS hunt observers who will be tasked with “evaluating the effectiveness of the hunting methods used,” the “applicability and practicability of other such methods,” and “time to death of hunted whales.” *Id.* While such reviews are appropriate, they should be conducted annually and not only after eight whales are reported to be struck. Considering how NMFS intends to manage and regulate the proposed hunt, the quality, accuracy, and reliability of the photographic-identification catalog is of critical importance as is ensuring that a hunt is using the least cruel killing methods available.

The preliminary issues of fact identified by NMFS raise concerns and are incomplete:

77. In its notice of hearing, 84 Fed. Reg. 13639, NMFS sets forth a number of issues of fact that may be involved in the hearing. *Id.* at 13639, 13641. AWI has carefully reviewed these proposed issues of facts. It agrees with some of the issues presented by NMFS but disagrees with others. Below, AWI identifies those issues of fact with which it disagrees and explains why it questions the accuracy of the statement. For those issues of fact not included below, for the purpose of this hearing, AWI is not taking a position at this time although this should not be interpreted as support for the NMFS conclusions.

78. I.A.1. “NMFS gave due regard to the potential effects of the proposed waiver on the distribution, abundance, breeding habits, and times and lines of migratory movement of the ENP gray whale stock.” *Id.* Response: NMFS has not considered the recent increase in reported dead gray whales, evidence of a high number of skinny whales, reduced gray whale calf production in 2019, the impact of predation on gray whales and their calves, or the short and long-term changes to Arctic ecosystems as a result of ocean warming

on the abundance of gray whales. Similarly, NMFS errs in not considering PCFG gray whales as a population stock under the MMPA and, subsequently, considering the effect of these same factors on the abundance of PCFG gray whales. Permitting the intentional killing of whales, particularly when the primary summer/feeding habitat of the species is undergoing such dramatic shifts, with unknown but potentially adverse consequences to gray whale numbers is biologically reckless.

79. I.A.2. "NMFS recognizes two stocks of gray whales under the MMPA, the western North Pacific (WNP) stock and the eastern North Pacific (ENP) stock." *Id.* at 13639, 13642.

Response: NMFS has erred in not designated PCFG gray whales as a population stock under the MMPA. See AWI Ex. 1 at pg. 22-28. NMFS should have made a determination on this question prior to making its preliminary decision to issue the requested MMPA waiver since a decision to designate the PCFG gray whales as a population stock, would have direct implications on the proposed whale hunt and the issuance of the requested waiver.

80. I.A.7. "The proposed waiver, at a maximum, would result in the deaths of 225 whales over 10 years, or an average of 2.5 per year. The proposed waiver, at a maximum, would reduce the ENP gray whale stock by 0.09 percent over 10 years, or an average of 0.009 percent per year." *Id.* at 13639, 13642 Response: This statement assumes that the ENP gray whale population number remain stable despite a recent increase in reports of dead gray whales, observational evidence of a large proportion of skinny whales, the myriad threats to gray whales throughout their migratory range including threats posed by other NMFS authorized actions, and ecosystem regime shift in the Arctic which could

result in adverse impacts to ENP gray whales. This statement also addresses the impact of the hunt on ENP gray whales instead of on PCFG gray whales, particularly those who use habitat within the Makah U&A – where the hunt, if authorized, would occur. During the odd-year hunts, only PCFG gray whales would be killed and, during even-year hunts, if the hunt remains close to shore, PCFG whales could be killed.

81. I.A.8. “Reducing the ENP stock by 0.009 percent per year or 0.09 percent over 10 years would not have a discernable effect on the ENP stock’s abundance.” *Id.* at 13639, 13642.

Response: This statement ignores the impact of the hunt on individual gray whales. Notably, NMFS considers the well-being of individual whales in its assessment of the impact of training throws and training approaches but doesn’t extend that consideration to individual whales killed during a hunt. In addition, this again ignores the impact of the hunt on PCFG gray whales and, in particular, the PCFG gray whales who inhabit the waters within the Makah U&A where the hunt, if authorized, would occur.

82. I.A.10. “Since 1997, the IWC has routinely approved an aboriginal subsistence catch limit for ENP gray whales for joint use by the United States and the Russian Federation. The United States and the Russian Federation have been routinely and currently are parties to a bilateral agreement that allocates the IWC catch limit between the two countries and allows either country to transfer to the other any unused allocation.” *Id.* at 13639, 13642. Response: The IWC has approved the joint aboriginal subsistence catch limit requests for ENP gray whales to ensure that the Chukotkan native hunters in Russia could pursue and kill gray whales to provide food for local consumption, not because member countries necessarily agreed that the Makah Tribe satisfied the IWC criteria to

qualify for an ASW catch limit. A number of IWC member governments made clear their opposition to the Makah qualifying for an aboriginal whaling catch limit request in 1996 and 1997 and few, if any, have explicitly altered their position on the Makah since that time. The decision by the U.S. to submit a joint request with the Russian Federation in 1997, 2002, 2007, and then to bundle all ASW requested catch limits for all four ASW countries into a single request in 2012 and 2018 virtually assured IWC approval for the requests (with the exception of Denmark's independent request for an increased ASW quota for native hunters in Greenland which was rejected). Over time, IWC member countries have not engaged in rigorous debate over reported need for ASW catch limits as was once routine. Furthermore, and most importantly, IWC members countries have not considered – and are not obligated to consider – U.S. law and, in particular, the definition of “whaling” under U.S. law in determining if the Makah qualified for an ASW quota given current IWC definitions of “aboriginal subsistence whaling” and “local consumption.” See AWI Ex. 1 at pg. 8-14.

83. I.A.12. “Based on long-standing practice and the current United States-Russian Federation bilateral agreement, the United States would likely continue to transfer any unused IWC catch limit to the Russian Federation for use by Chukotkan natives, so that the net effect of the hunt on ENP gray whale abundance would be the same with or without the proposed waiver.” *Id.* at 13639, 13642. Response: This is not true in practice as the Chukotkan native hunters do not take the full quota of gray whales approved by the IWC and allocated to the Russian Federation pursuant to the United States-Russian Federation bilateral agreement. Over the past ten years for example, the

Russian gray whale quota was 135 each year but the average number of whales killed per year was 122.6 and only exceed the quota in a since year. See https://iwc.int/table_aboriginal. Consequently, had the U.S. not transferred its unused quota to the Russian Federation then there would have been no effect on the numbers taken by the Chukotkan hunters since they never exceeded their own quota but it would have saved up to five whales from potentially being killed by the Chukotkan hunters.

84. I.A.17 “Unsuccessful strike attempts and training harpoon throws are expected to result in temporary disturbance but not to have a lasting effect on the affected whale’s health or behaviors.” *Id.* at 13639, 13642. Response: Notably, NMFS recognizes the potential impact of the disturbance caused by unsuccessful strike attempts to individual whales but does not provide the same consideration for whales killed during the hunt opting instead to evaluate the hunt impacts at the population level.

85. I.A.18. “Approaches are not expected to have a lasting effect on the affected whale’s health or behaviors.” *Id.* Response: See response to I.A.17.

86. I.A.19. “Photo-identification is a reliable, feasible method of identifying PCFG and WNP whales.” *Id.* Response: This is accurate but the value of the photo-identification method to properly classify gray whales depends on the ability to obtain the proper photographs of a whale, the quality of the photographs, the amount of time on the water securing photographs, the geographic area covered by those obtaining the photographs, and the expertise of those reviewing the new photographs and comparing them to the existing PCFG and WNP gray whale photo-identification catalogs. This, in turn, requires sufficient and consistent funding to ensure that the catalogs are properly maintained and to

support a long-term and consistent effort to secure photographs of PCFG and WNP gray whales including any new recruits to these populations that were either added by birth or by immigration. NMFS has not provided any information about the logistics of the photo-identification process or, more importantly, disclosed the cost of the program, the source of funding, and the availability of funding long-term to support the program including the maintenance of the catalogs.

87. I.A.20. “The proposed waiver, at a maximum, would result in 16 strikes of PCFG whales over the 10-year duration of the waiver period (average of 1.6 per year), of which only 8 strikes would be of PCFG females (average of 0.8 per year).” *Id.* Response: Given the definition of “strike” in the proposed regulations, NMFS should clarify if the even-year and/or the odd-year hunt will be terminated once the Makah Tribe strike limit for PCFG whales, or the sub-strike limit for PCFG female whales, even if those limits are met well before the end of the 10-year waiver period.

88. I.A.21. “Under the proposed waiver, NMFS would manage impacts of the proposed waiver to PCFG whales through photo-identification and specified assumptions.” *Id.* at 13639, 13642. Response: See response to I.A.19. It is unclear what NMFS means by “specified assumptions.” This should be clarified.

89. I.A.22. “The proposed waiver would require that hunting cease if PCFG abundance were to fall below set levels. The levels referred to as low-abundance triggers, are 192 whales, or a minimum abundance estimate of 171 whales.” *Id.* Response: The origins of the low-abundance triggers are not clear. In the preambulatory text in the Proposed Regulations, NMFS states that “[w]e selected these levels as the low abundance triggers

because they are the lowest values estimated for the population during the recent period of stability starting in 2002 (citing Calambokidis et al., 2017). 84 Fed. Reg. 13604, 13609. Yet, this does not explain why these particular numbers, particularly the upper limit of 192 whales, were selected versus, for example, selecting higher low-abundance triggers which would be more precautionary. NMFS should provide clarification as to the origins of these low-abundance triggers.

90. I.A.23. “NMFS would use a forecasting model to provide up-to-date PCFG abundance estimates during the waiver period.” 84 Fed. Reg. 13639, 13641. Response: The forecasting model would be based on estimates of PCFG gray whales obtained from photo-identification surveys which, to be accurate, will require the long-term continuation of the gray whale photo-identification project. NMFS does not disclose any information about the forecasting model itself, who created it, its parameters, its inherent assumption, who will run the model, and how and where the results will be published.

91. I.A.24. “PCFG abundance has been stable or increasing since around 2002, with an average annual increase in abundance of 3.5 animals between 2002 and 2015.” *Id.* Response: Notably, the preambulatory text in the Proposed Regulations provides conflicting information about the size and rates of increase of PCFG gray whales. First, NMFS reports that “The size of the group has remained relatively stable at about 200 animals since 2002 and is recently increasing (citing Calambokidis et al., 2017).” 84 Fed. Reg. 13604, 13607. It then states that: “The most recent (2015) abundance estimate of PCFG whales (Calambokidis et al., 2017) is 243 whales with an Nmin of 228.

Calambokidis et al. (2017) note that PCFG abundance estimates show a high rate of increase in the late 1990s and early 2000s and now appear to be relatively stable since 2002.” *Id.* This is confusing because NMFS appears to be suggesting that the PCFG gray whale abundance estimates are both stable since 2002 yet also increasing, when either trend – but not both – may be true. Furthermore NMFS does not disclose whether any threats to PCFG gray whales within their summer range have increased or become more severe in recent years. Explanation as to the reasons for the recent stability, or lack of growth, of the PCFG population is warranted.

92. I.A.29. “Migrating ENP gray whales are only expected to be encountered during even-year hunts. Migrating whales are steady swimmers that would transit the hunt area within several hours. The hunt area is a very small portion of the ENP gray whale stock’s migration corridor.” *Id.* at 13639, 13642. Response: NMFS ignores the possibility that some migratory whales, including WNP gray whales, may temporarily slow or suspend their migration, particularly when migrating to the north during the late winter/spring months to feed. If these whales were to feed within the Makah U&A during an even-year hunt, they would be more susceptible to being killed since they would be spending more time in the Makah U&A than if they steadily transited the hunting area. It is not clear if such temporal considerations were factored into the analysis of the potential impact of the proposed hunt on WNP gray whales.

93. I.A.30. “During even-year hunts, adverse weather and ocean conditions coupled with shorter periods of daylight would keep most hunts and training exercise close to shore and of short duration.” *Id.* Response: Though not disclosed by NMFS, most hunts and

training exercise conducted during odd-year hunt, which would only target PCFG gray whales, would also be close to shore due to the typical distribution patterns of PCFG gray whales during the spring, summer, and fall.

94. I.A.31. “A very small number of migrating ENP gray whales would be subjected to hunt or training activities. Any gray whale subject to such activities (but not struck) would likely experience the encounters as a temporary and localized near-shore event that would not result in a lasting effect on the whale’s migratory movements.” *Id.* Response: See response I.A.17.

95. I.B.1. “The proposed waiver is not expected to have a meaningful effect on the health, stability, or functioning of the marine ecosystems or on the ENP stock’s abundance relative to OSP.” *Id.* Response: It is unclear what the basis is for this proposed issue of fact. Gray whales can have a significant impact on their ecosystems, as prey and due to their bottom feeding behavior. This behavior distributes nutrient-rich substrates, including organic matter, into the water column benefiting a number of marine species, including marine seabirds (Oliver & Slattery, 1985, AWI Ex. 27; Johnson and Nelson, 1984, AWI Ex. 28). Furthermore, whales can redistribute nutrients both vertically (e.g., whale pump) and horizontally (e.g., whale conveyor belt) (Roman and McCarthy, 2010, AWI Ex. 29; Roman et al., 2014; AWI Ex. 30) and sequester carbon (Pershing et al., 2010, AWI Ex. 31). In addition, whale falls (i.e., dead whale carcasses sinking to the ocean floor) can provide massive amounts of food to a variety of marine species and can increase biodiversity on the ocean floor (Smith and Baco, 2003, AWI Ex.32; Smith et al., 2015, AWI Ex. 33). If the marine ecosystem includes the human environment, then gray

whales along the west coast of North America are of enormous educational and economic value for whale and wildlife watching businesses. While it is easy to suggest that a small number of gray whales taken in a hunt cannot possibly provide a meaningful effect on the health, stability and functioning of marine ecosystems, if such effects have not been adequately studied then such claims may have no merit. At a minimum, NMFS should reevaluate this claim to ensure that it is accurate, supported by credible science, and that it considers the potential effect of gray whales on ecosystem health, stability, and functioning at different gray whale populations sizes.

96. I.B.2. “The level of hunting that could occur under the proposed waiver would affect only a small fraction of the ENP stock and the stock’s ecosystems. Most effects of the hunt would be temporary and localized.” *Id.* at 13639, 13642. Response: See response to I.B.1. NMFS’s conclusion that “most effects of the hunt would be temporary and localized” is precisely why it must consider the impacts of the hunt to ecosystem health, stability, and function at a more localized level including in the Makah U&A. A more localized area of analysis would also be consistent with the ruling in *Anderson*.

97. I.B.3. “The ENP stock functions within many large ecosystems shaped by a variety of processes. The smallest recognized ecosystem that encompasses the hunt areas is the northern California Current ecosystem.” *Id.* Response: In *Anderson*, the court made clear the need to consider the impacts of the proposed hunt at a local level. The Makah Tribe, in its waiver application request, did just that, asking for the analysis of the impact of its proposed hunt on PCFG gray whales to consider those whales that utilize the OR-SVI region of the PCFG gray whale range. In the 2015 DEIS, NMFS included PCFG gray whale

data at multiple scales, including, within the Makah U&A, but it did not consistently focus or apply the correct statistics to the OR-SVI or Makah U&A regions as directed by *Anderson*. In the Proposed Regulations, NMFS elected to base its analysis of the proposed hunts' impact to ecosystem health, stability, and function at the level of the northern California Current ecosystem. As noted here, this is the smallest recognized ecosystem that encompasses the hunt areas. This conflicts with the ruling in *Anderson* and ignores the fact that there is a sub-populations of PCFG gray whales who have historically shown a high site fidelity to specific summering areas (e.g., the Makah U&A) within the PCFG range. It is these whales who are at greatest risk due to the proposed hunt, particularly during odd-year hunts, and it is the potential impact of the proposed hunt on this sub-group and the localized ecosystem that they inhabit within the Makah U&A that should be the focus of the NMFS analysis.

98. I.B.4. "The northern California Current ecosystem is shaped by dynamic, highly energetic, large-scale processes, including currents, upwelling, freshwater runoff, seasonal wind/storm patterns, and variable climate patterns such as El Niño. The role of ENP gray whales in structuring this ecosystem is limited." *Id.* at 13639, 13642. Response: The examples provide are large-scale biogeophysical and biogeochemical processes that occur and affect all marine ecosystems. No species is likely to have the same type of impact on its ecosystem as compared to these larger-scale processes. Instead, such impacts may be more subtle or localized, resulting in impacts to the structure and functioning of the habitat actually occupied and used by the species; these are the type of localized analyses contemplated by the court in *Anderson*. For example, the impact of

a hippopotamus population on a savannah ecosystem in Africa is likely minimal, but the population's impact to its aquatic and riparian habitat within that larger ecosystem is substantial (Pennisi, 2014, AWI Ex. 34; Schoelynck et al., 2019; AWI Ex.35). That same would apply to gray whales. Their impact on the structure and function of the entire northern California Current ecosystem may, based on current knowledge, be limited, but within the portion of that ecosystem occupied by gray whales, their contribution to the ecosystem's structure and/or function may be far more significant and is worthy of study.

99. I.B.5. "The number of removals of gray whales that could occur under the proposed waiver is too small to have a discernable effect on the northern California Current ecosystem." *Id.* at 13639, 13642. Response: See response to I.B.4.

100. I.B.6. "Even at the smallest biologically relevant scale, the northern Washington coastal environment, the level of hunting that could occur under the proposed waiver would not have a perceptible effect on the health or stability of the marine ecosystem or the functioning of the ENP stock within the ecosystem." *Id.* Response: The proposed hunt is not limited to killing whales as it also permits over 350 training approaches, throwing of training harpoons, and a number of unsuccessful strikes. NMFS ignores the potential direct and indirect impact of these activities on gray whales, their behavior, and their use of the northern Washington coastal environment. This in turn, may adversely impact the health and stability of the local environment. The restoration of wolves to Yellowstone National Park had a profound impact on the ecology of the park, not only because a top-line predator was able to resume its role in

the ecosystem by killing elk and other ungulates, but because the ‘fear factor’ of having wolves in the habitat altered the temporal and spatial habitat use patterns by elk and other ungulates (Ripple and Beschta, 2004; AWI Ex. 36; Laundré et al., 2010; AWI Ex. 37). This, in turn, resulted in measureable benefits to the park’s ecology including by restoring willow, aspen, and cottonwood forests, improving overall vegetation structure in riparian areas, and permitting the expansion of the park’s beaver population which, in turn, provides significant benefits to beaver-occupied habitats (Ripple and Beschta, 2011, AWI Ex. 38; see generally Law et al., 2017, AWI Ex. 39). Similarly, white-tailed deer have altered their temporal and spatial use of their habitat to reduce the risk of being killed during deer hunting season (Little et al. 2016, AWI Ex. 40). Here, the killing, chasing, harassing, and practice hunting of gray whales could have a profound influence on the whales, including PCFG gray whales, that occupy the Makah U&A. Overtime as they better understand the new threat posed by Makah whalers, they could alter their distribution and movements patterns to avoid the risk of being killed and/or could abandon the near-coastal areas of the Makah U&A entirely. Killing and landing a single gray whale during an odd year hunt may not represent a significant impact to the health, stability, or structure of the northern Washington coast marine ecosystem. Altering the temporal and spatial distribution and movement patterns of whale in that ecosystem and/or modifying gray whale behavior in the vicinity of canoes and other boats, however, may have more significant impacts, including impacts to whale/wildlife watchers and impacts that may not even be predictable.

101. I.B.7. “The ENP stock has been within OSP levels since at least 1995. In 2012, NMFS concluded that the ENP stock was at 85 percent of carrying capacity with an 88 percent likelihood that the stock was above its maximum net productivity level. NMFS’s current stock assessment report for the ENP stock continues to adopt this conclusion.” *Id.* at 13639, 13642. Response: NMFS fails to provide this same information for WNP gray whales or PCFG gray whales in the Proposed Regulations. If NMFS designated PCFG gray whales as a population stock under the MMPA, it would not be able to issue the requested waiver since the proposed hunt, particularly during an odd-year hunt, has a high likelihood of killing a PCFG gray whale.
102. Other issues of fact that warrant consideration at the hearing include: the designation of PCFG gray whales as a population stock under the MMPA; whether PCFG gray whales, if so designated, would be within OSP levels and/or qualify as “depleted;” whether WNP gray whales are within their OSP; and if the issuance of the requested waiver will “disadvantage” gray whales. Since OSP is a critical factor in determining if an MMPA waiver should be issued, analysis of this issue at the hearing would provide evidence for Judge Jordan to consider in making his recommendation. Furthermore, since NMFS has continued to refuse to designate PCFG gray whales as a population stock under the MMPA despite evidence that warrants such a designation, this issue merits consideration at the hearing. Since NMFS’s inaction on this matter may be due, in part to, the implications of such a designation (including a related finding that the stock is depleted) to the proposed hunt, it is even more imperative that the court seek expert testimony on this matter.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing statements are true and correct to the best of my knowledge, information, and belief.

Executed this 20th day of May, 2019.

A handwritten signature in cursive script, appearing to read "D.J. Schubert".

Donald (DJ) Schubert