

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

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<i>In re:</i>	) Administrative Law Judge
	) Hon. George J. Jordan
<b>Proposed Waiver and Regulations Governing</b>	) Docket No. 19-NMFS-0001
<b>the Taking of Eastern North Pacific Gray</b>	)
<b>Whales by the Makah Indian Tribe</b>	) RINs: 0648-BI58; 0648-XG584

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**MAKAH TRIBE'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW**

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The Makah Indian Tribe submits these proposed findings of fact and conclusions of law pursuant to the October 25, 2019, Order Approving Hearing Management Proposal. *See* Order at 2 & Att. 1 § 2(f); *see also* 50 C.F.R. § 228.19(b); 85 Fed. Reg. 5196, 5196-97 (Jan. 29, 2020).

## I. PROPOSED FINDINGS OF FACT

### A. FACTS REGARDING THE 1855 TREATY OF NEAH BAY AND THE CONTINUING IMPORTANCE OF WHALING TO THE MAKAH TRIBE.

In late January 1855, the Makah Tribe and the United States negotiated a treaty in which the Tribe ceded most of its territorial land base while reserving the right to harvest marine animals such as fish, whales and seals in the waters of the Pacific Ocean and Strait of Juan de Fuca as they had done for millennia. In securing these rights, the Makah leaders who negotiated the treaty understood they were protecting their foundational relationship with the sea and ensuring that Makahs would always be able to provide for their culture, subsistence, spirituality, and economy from the marine waters teeming with life near their reservation on the northwestern tip of the Olympic Peninsula.

The following facts relate to the Tribe’s treaty whaling right and the continuing importance of whales and whaling to Makahs.

1. By the time the **Qʷidiččaʔa·t̓x̓**, or “People of the Cape,” signed the Treaty of Neah Bay on January 31, 1855, they had been whaling for well over 2,500 years. Reid Decl. at 10-11.<sup>1</sup>
2. As a people who define themselves in terms of their historical and contemporary relationship with the sea, hunting **čítapuk** represented (and continues to be) the most important aspect of that relationship. Reid Decl. at 10-11; *see also id.* at 7 (“[A]s part of their broader relationship with the sea, whaling defines who the Makahs are as both a people and as an Indigenous nation from the distant past through the present and into the future.”).
3. Reflecting this importance, Makah negotiators insisted that the treaty include whaling rights – separate from and in addition to fishing and sealing rights – and they

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<sup>1</sup> As in the Tribe’s Post-Hearing Brief, citations to written testimony follow the abbreviations specified in Appendix A, the Table of Written Testimony. Appendix B contains the exhibits cited and their full titles.

achieved their objective by reserving for themselves the “right of . . . whaling . . . at usual and accustomed grounds and stations” in the final treaty language. Reid Decl. at 61; Treaty of Neah Bay, art. 4, 12 Stat. 939 (Jan. 31, 1855) (attached as Ex. M-0601 to the Arnold Decl.).

4. The Treaty of Neah Bay was ratified by the Senate on March 8, 1859, and proclaimed by the President on April 18, 1859. Article 4 of the Treaty of Neah Bay states in full:

The right of taking fish and of whaling or sealing at usual and accustomed grounds and stations is further secured to said Indians in common with all citizens of the United States, and of erecting temporary houses for the purpose of curing, together with the privilege of hunting and gathering roots and berries on open and unclaimed lands: Provided, however, That they shall not take shell-fish from any beds staked or cultivated by citizens.

12 Stat. 939 (Jan. 31, 1855) (attached as Ex. M-0601 to the Arnold Decl.).

5. Without this explicit acknowledgement of their whaling rights, which makes the Treaty of Neah Bay unique among the hundreds of treaties the United States signed with tribes, Makahs would have refused to sign. Reid Decl. at 61.
6. The Makahs who negotiated the treaty would have understood the “in common” provision to mean something very precise – a simple extension of limited usufruct rights to non-Natives, much as they did to other Natives who sought to participate in the fisheries owned by the Makah chiefs. The concept of “fishing together” meant retaining Indigenous authority over these resources, and they would not have understood that by agreeing to the treaty (including its “in common” language) they were yielding their authority over and right to take fish, whales, and seals to non-Natives or anyone else, whether through management deference, regulation, interference, or other means. Reid Decl. at 31.
7. Hunting <sup>ʔ</sup>**citapuk** provided Makahs with substantial amounts of meat, blubber, oil, sinew, and bones – for household consumption or in making material items. Reid Decl. at 118.
8. Makahs’ heavy reliance on whales for subsistence in pre-contact times was confirmed by the faunal remains discovered at the Ozette Village archaeological site. In addition, the Tribe’s substantial harvests were documented by non-Natives after contact. Reid Decl. at 118-20, 177-93.
9. Harvesting whales made it possible for Makahs to be generous with their abundant resources, and the reputation for sharing food with others was the source of the name Makah, meaning “generous with food” or “you never leave here without being full,” given by their S’Klallam neighbors to the east. Whale products were so prevalent in the Makah villages that one observer called them the “blubber-eating aborigines,” a vivid example of how procuring and consuming so much whale meat and blubber

shaped Makah identity. Reid Decl. at 20-21, 120; Tr. V3 (Reid) at 33:7-17, 34:18-21; Tr. V3 (Arnold) at 10:2-4.<sup>2</sup>

10. For Makahs, whaling has always been much more than simply hunting **čítapuk** and consuming it because Makah whaling includes a constellation of practices that define who they are as the **Qʷidiččaʔa·t̥x̥** and infuse many facets of their lives. Reid Decl. at 10, 78.
11. Makah whaling practices include ritual preparations and ceremonies, songs and dances, artistic representations, marriage practices, family titles, place names around Cape Flattery, potlatches and feasts, oral histories, authority and governance, and trade, among others. Reid Decl. at 46, 194-95; *see also id.* at 78-161 (describing at length the social and cultural importance of whaling to Makahs).
12. Due to the near extirpation of whales from over-exploitation by non-Native commercial whaling, opportunities for Makahs to hunt **čítapuk** declined in the late 19th and early 20th centuries. Nonetheless, whaling remained important to Makahs during this time, and they continued to regularly hunt whales. Reid Decl. at 190-93; *see also id.* at 188-89 (rebutting the claim that Makahs abandoned whaling to pursue fur seals in the late 19th century).
13. Ultimately, a number of factors led the Tribe to voluntarily discontinue its whale hunts in the late 1920s, including demographic shifts and a 1923 tsunami that destroyed Makah canoes and whaling gear. *Id.* at 191-92. Most important, however, was the deeply personal relationship Makahs have with whales, which caused them to take their responsibilities to nonhuman kin such as whales seriously, and this tough decision made sense—they could return to hunting **čítapuk** once populations had rebounded. *Id.* at 193, 195; *see also* Arnold Decl. ¶ 21 (“When whales became scarce, we didn’t want to hurt them by hunting, so I grew up just watching whales from the bluff. That was one of the ways I maintained a relationship with whales.”).
14. The Tribe’s radical decision in the late 1920s to suspend whaling until **čítapuk** numbers recovered was always viewed as a temporary one, particularly in the context of the 2,700-year history of Makah whaling. Reid Decl. at 194-95. Whales remained important to Makahs, and they always intended to go whaling again. Arnold Decl. ¶ 22; *see also* Reid Decl. at 193 (Makahs “always intended to revive an active whaling practice at some point in the future”).
15. The Tribe’s relatively brief hiatus from active hunting did not break the continuity of the **Qʷidiččaʔa·t̥x̥**’s relationship with whales and whaling. Reid Decl. at 196. The Tribe maintained many aspects of Makahs’ unique relationship with whales over the generations without active hunting. Arnold Decl. ¶ 17.
16. Makah Tribal member Polly DeBari was an integral part of the Tribe’s successful 1999 hunt. When she was growing up on the reservation, she learned from the

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<sup>2</sup> The Tribe’s citations to the hearing transcript use the following convention: Tr. VOLUME # at PAGE#:Line#S.  
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- teachings of her family and the Makah community as a whole regarding the role of a woman in the hunt. The lessons passed down from generation to generation were one critical way in which Makahs continued to keep their whaling traditions vibrant while awaiting a return to active hunting. DeBari Decl. ¶ 5; *see also* Arnold Decl. ¶ 21 (traditional practices to ensure whales would always be available and ceremonies to honor a whale’s spirit after a successful hunt).
17. After decades of waiting for whale populations to rebound, the Tribe’s commitment to restoring an active practice of hunting whales reached fruition in the 1990s. Reid Decl. at 197-98.
  18. The Eastern North Pacific population of gray whales was removed from the list of endangered and threatened species in 1994, and the Tribe obtained an aboriginal subsistence whaling catch limit from the International Whaling Commission in 1997. *Id.* at 198.
  19. A whaling crew was formed, underwent rigorous physical and spiritual preparations, and on May 17, 1999, struck a gray whale and towed it to Front Beach on the Makah Reservation, where the crew was greeted by a huge crowd of Makahs eager to witness and celebrate the revival of their cultural, subsistence and spiritual relationship with whales. *Id.* at 198-99.
  20. Restoration of the hunt had immediate benefits for the Makah community. For the first time in decades Makahs had access to fresh whale meat and blubber and other whale products obtained from a hunt under their treaty. True to their nature, Makahs shared the bounty from this animal given to them by the creator and hosted a community feast attended by people throughout the region which showcased the great importance of the whale as a food resource and central part of Makah culture. Pascua Decl. ¶ 14; Greene Decl. ¶ 6; Reid Decl. at 199.
  21. Many people contributed to butchering the whale, and the meat and blubber were shared among Makahs (in addition to the guests at the Tribe’s feast). DeBari Decl. ¶¶ 8-9; Pascua Decl. ¶¶ 13-14, 19; Greene Decl. ¶¶ 5-6; Arnold Decl. ¶¶ 10, 25.
  22. The plentiful, fresh supply of natural food supplied by the whale hunt provided for Makah families and the community as a whole through Makahs’ traditional practice of sharing the natural resources they have always depended on. Pascua Decl. ¶¶ 18-19 (sharing “is part of our custom as Makahs”); DeBari Decl. ¶ 12 (health benefits of eating traditional foods); Greene Decl. ¶ 16 (“food that sustained Makahs for thousands of years”); Tr. V2 (Pascua) at 43:14-15 (“whale products are . . . good for you, they’re healthy”).
  23. For Makahs, eating whale products is more than merely a dietary need – it connects them with their ancestors and is a deeply spiritual experience. DeBari Decl. ¶ 13 (“it is more than nutrition; the animal was feeding my spirit”); Tr. V3 (DeBari) at 22:16-17 (“how important it was for not just the nutrition, but for your spiritual soul to eat the whale”)

24. In light of the tremendous importance of whales as a nutritional resource for Makahs and their families, a permissive approach to sharing, possession and consumption of edible whale products, especially within Makah households, is essential to fulfilling the core treaty purpose of hunting whales to meet subsistence needs. Arnold Decl. ¶ 20.
25. The proposed regulations regarding sharing and consuming edible whale products outside of the Makah Reservation with non-members, §§ 216.113(b)(1)(i)-(ii), 216.115(a)(14), 216.115(b)(2), would make it very difficult, if not impossible for Makah tribal member Greig Arnold to share whale products with his non-member wife in their off-reservation apartment and for his son to provide whale meat and blubber for his entire family in their Everett-area home, because his wife is also not an enrolled Makah. Arnold Decl. ¶ 20; Tr. V3 at 9:23 – 10:22; *see also* Tr. V1 (Yates) at 44:18-24.
26. Beyond meeting Makahs’ nutritional and cultural needs, other benefits that flow from exercising the treaty require an active whale hunt and cannot be replicated by substituting non-hunting activities. Arnold Decl. ¶ 17; Pascua Decl. ¶ 21; Reid Decl. at 196 (“[R]eplacing whaling with whale watching or non-lethal ceremonial ways of honoring whales would disrespect this foundational relationship that the **Qʷidiččaʔa·t̓x** have with **čítapuk**.”).
27. Whaling is central to the identity of the Makah people, and over time it has been (and remains) an essential element of the Tribe’s culture and subsistence. Arnold Decl. ¶¶ 2, 22; Pascua Decl. ¶¶ 2, 20; DeBari Decl. ¶¶ 2, 15; Greene Decl. ¶¶ 2, 15; Reid Decl. at 10, 78, 196.
28. A whale hunt requires intense physical and spiritual preparation over an extended period of time for the hunters as well as their spouses and extended family. Arnold Decl. ¶¶ 7, 16; Greene Decl. ¶¶ 5, 7-9; DeBari Decl. ¶¶ 5-6. These preparations are necessary for a successful hunt, but they also have far-reaching benefits for the Makah community by connecting Makahs across generations, fostering tribal unity, and reinforcing Makah culture, teamwork of the crew and individual health and spirituality. Arnold Decl. ¶¶ 7, 16, 25; Greene Decl. ¶ 15; DeBari Decl. ¶¶ 7, 16; Pascua Decl. ¶¶ 8, 11.
29. Although some cultural practices can take place in the absence of a harvested whale, only after a whale has been landed can families practice certain songs and dances in whaling ceremonies. Arnold Decl. ¶¶ 11, 17; Pascua Decl. ¶ 8.
30. Some Makah whaling ceremonies reinforce that a living thing has surrendered its life to the hunters, while others provide a way for hunters to show their appreciation for members of their family and the community who supported them in a successful hunt. Neither would be possible without actual hunting. Arnold Decl. ¶ 21; DeBari Decl. ¶ 9; Reid Decl. at 149-153 (oil potlach); Tr. V3 (Reid) at 34:10-13 (same). Ceremonies



- bring families together and contribute to the unity of the entire Makah community. Arnold Decl. ¶ 11.
31. If the Tribe could not hunt whales, in addition to losing an important food source it would mean giving up many ceremonies, prayers, songs, and dances. As Greig Arnold put it, “Makahs would lose their identity.” Arnold Decl. ¶ 22.
  32. For individual whalers and whaling crews, without active whaling it is difficult to engage in and sustain the high level of physical and spiritual preparation required to bring home a whale. Greene Decl. ¶¶ 7, 11; Arnold Decl. ¶ 17.
  33. Whaling plays an important role in the Tribe’s efforts to revitalize use of the Makah language. The use of Makah words associated with whaling and whaling songs and stories taught in high school language classes were brought to life through the 1999 hunt. Pascua Decl. ¶ 8; *see also* Tr. V2 (Pascua) at 43:16 – 45:7 (singing and explaining Makah “whale towing song”). The Makah language is an important part of being a whaler, including learning from elders speaking Makah, studying whaling terminology and culture in school, and using native language in preparing for a hunt. Greene Decl. ¶¶ 5, 7, 12-14.
  34. Whaling also enables Makahs to connect with their heritage by honoring their ancestors and departed kin through continuing to hunt and utilize whales. DeBari Decl. ¶¶ 10, 16 (“all of our ancestors were standing with us on the beach” when the crew landed the 1999 whale); Arnold Decl. ¶ 22 (“Makahs . . . have always intended to go whaling again . . . . Keeping true to that commitment is a way to honor our ancestors and our culture and look out for the needs of future generations.”).
  35. Notwithstanding the inability to hunt under their express treaty whaling right for more than two decades, the successful hunt remains a vivid and emotional experience for Makahs who were alive at the time. DeBari Decl. ¶¶ 10-11; Greene Decl. ¶ 6.
  36. In 2000, the Tribe’s efforts to pursue *čítapuk* were once again put on hold due to other forces outside the Tribe’s control – federal court litigation brought by animal welfare groups between 2000 through 2004. Reid Decl. at 200; Greene Decl. ¶ 10; Arnold Decl. ¶ 8; *Metcalfe v. Daley*, 214 F.3d 1135 (9th Cir. 2000); *Anderson v. Evans*, 371 F.3d 475 (9th Cir. 2004).
  37. Since the last hunt in 2000, the Tribe has sought – and is still waiting for – authorization to resume its treaty whale hunting. For many Makahs, it feels as if they have been waiting for a new government approval of their hunt for an eternity. Reid Decl. at 200; Greene Decl. ¶ 12.
  38. The effect on the Tribe from the absence of whaling for over twenty years speaks volumes about the importance of the whale hunt by highlighting what is missing when a hunt cannot occur. While their identity as Makahs and whalers persists without an active whale hunt and many aspects of their unique relationship with

whales have been maintained over the generations without active hunting, it is much harder to realize the full cultural, spiritual, physical, community, and family benefits of whaling without a hunt because Makahs cannot practice certain whaling ceremonies, songs and dances and they have no whale products to utilize in the community. Even if a whale comes to the Tribe by some chance occurrence, such as a ship strike, it cannot replace the regular hunting activity that sustained the Makah people for thousands of years. Without the prospect of going whaling, crews will be reluctant to undergo the intense physical, spiritual and emotional training that is required for a successful hunt, and the benefits that spread to the community as a whole will not occur. Arnold Decl. ¶ 17; *see also* Greene Decl. ¶ 11 (whaler Daniel Greene, Sr. testifying that the “absence of whaling since 2000 has been heart-wrenching, especially after the two years of hunting where our culture was living and breathing”).

39. In the more than two decades that have passed without a hunt, elders with knowledge of whaling have died and a new generation has lived their entire lives without “whaling in [the Makahs’] village.” Pascua Decl. ¶ 16; Arnold Decl. ¶ 11; DeBari Decl. ¶¶ 10-11.
40. The five witnesses who testified on behalf of the Tribe about Makahs’ treaty right of whaling, the continuity of the Tribe’s relationship with and practices related to whales and whaling, and the continuing importance of hunting whales to Makah culture, subsistence, and identity – Maria Pascua, Greig Arnold, Daniel J. Greene, Sr, Polly DeBari, and Dr. Joshua Reid – were not challenged by any party to this proceeding through testimony or cross-examination.

## **B. FACTS REGARDING THE TRIBE’S PROPOSED CEREMONIAL AND SUBSISTENCE HUNT OF GRAY WHALES**

A brief description of the Tribe’s proposed hunting methods provides important context for the proposed waiver and regulations and the role of the hunt in Makah cultural, subsistence and spiritual life.

41. When the Tribe resumed its whale hunt in the 1990s, it developed a hunting methodology with several purposes. The Tribe’s objectives included the following: to kill the whale quickly (especially compared to historical whaling methods); to reduce the chance of losing a struck whale; to provide for the safety of the crew (and any bystanders and observers), and to utilize new hunting tools while maintaining traditional aspects of the hunt that remained important to the Tribe. Scordino Decl. at 14.
42. Makahs historically hunted from a cedar canoe with a crew of up to eight hunters, each with a specific role. Harpoons, with tips made of mussel shell and elk-antler barbs, were used to strike the whale and attach seal-skin floats, and the whale was

- killed with a lance. *Id.* at 13-14; *see also* Reid Decl. at 46-72 (description of historic Makah whaling). Over time, Makahs adapted their whaling methods to new technologies. *Id.* at 62-63, 68, 74-75.
43. To achieve the objectives for its modern-day hunt, the Tribe worked with a large animal veterinarian and ballistics expert to test and select a large caliber rifle as the kill weapon to reduce the time to death of the animal. *Id.* at 14-17. Other experts evaluated the public safety implications of using the rifle. *Id.* at 17-18, 22.
  44. The Tribe also adapted other modern gear for its hunt, including stainless steel, toggling harpoon heads, nylon ropes, polyform buoys, and motorized vessels to serve as the chase and support boats for the hunt. *Id.* at 18-19.
  45. On May 17, 1999, the Tribe demonstrated how its proposed blend of new technology and traditional whaling methods can be utilized during a hunt to achieve a short time to death and successfully land a struck whale. *Id.* at 19.
  46. An effective training program is essential to the Tribe's intent to conduct hunts that are safe, efficient, and minimize the time to death of the whale. The Tribe has developed (and is continuing to refine) a training program utilizing experience from the 1999 hunt and expertise in the Makah Marine Mammal Program. *Id.* at 20-21.
  47. Training will include detailed instruction on gray whale anatomy and efficient hunting practices as well as field training with the harpoon and rifle. *Id.* at 21.
  48. One member of the crew will be designated as the safety officer, who along with the rifleman, will be in a motorized chase boat during the hunt. The safety officer will play a key role in ensuring the safety of the hunt by being responsible for communicating with the rifleman about when it is safe to shoot, *e.g.*, by keeping track of other boats in the area and communicating, either verbally or through touch, with the rifleman to inform him when it is safe to discharge the rifle. *Id.* at 20-22; Ex. M-0186 at 8-11 (describing safety requirements of the training program).
  49. The Tribe presented a version of the training program to a meeting of scientists from whaling nations and Native communities in 2015. The expert group endorsed the training program and noted that future Makah whale hunts should be safe and efficient. *Id.* at 22.

### **C. FACTS REGARDING NORTH PACIFIC GRAY WHALES.**

50. Gray whales are a resilient species that has existed for millions of years. They are extremely adaptable to different environmental conditions and food availability. Gray whales have survived through at least one ice age and the warming that occurred thereafter. Tr. V5 (Villegas-Amtmann) at 196:1 – 197:7; Ex. SVA-3 at 14-15.

51. Gray whales in the North Pacific Ocean are found on both the eastern and western margins. Bickham Decl. at 6.
52. Commercial whaling reduced North Pacific gray whales to very low levels by the early 20th Century, but those migrating off of and breeding in the eastern North Pacific Ocean, *i.e.*, Eastern Gray Whales (EGW),<sup>3</sup> recovered to pre-exploitation levels and numbered nearly 27,000 animals as of the last estimate in 2016. *Id.* at 4, 6, 19.
53. Gray whales that utilized summer feeding areas in the Sea of Okhotsk off Russia, including areas off the northeastern coast of Sakhalin Island and the southeastern coast of the Kamchatka Peninsula, *i.e.*, Western Gray Whales (WGW),<sup>4</sup> are currently at much lower levels (approximately 290 animals), but are increasing at 2-5% annually. *Id.* at 7; Weller Decl. ¶ 36; NMFS Ex. 2-12 at 13.
54. A third group of whales, the Pacific Coast Feeding Group (PCFG) is relevant to this proceeding because it too is relatively small in size (approximately 232 animals), and migrates in the eastern North Pacific Ocean to feeding areas from northern California to northern British Columbia rather than the Arctic feeding grounds of the larger ENP population. Bickham Decl. at 20; Weller Decl. ¶ 16; NMFS Ex. 3-101 at 1; Scordino Decl. at 36-37.
55. Because North Pacific gray whales migrate in shallow waters close to the coast, feed in identified areas, and are subject to impacts from Native hunting, they have been studied extensively for more than fifty years and have a decades-long time series of abundance estimates and extensive photographic and genetic catalogs. They are among the most studied and best understood of any large whale species on earth. *See* Tr. V2 (Weller) at 106:15-23 (state of gray whale science is “very advanced . . . . [W]e have a terrific data set for both the [WNP stock, the [ENP] stock and then the feeding group in the [PCFG].”); Weller Decl. ¶ 21; Brandon Decl. at 11-12; Scordino Decl. at 30-31; *see also* NMFS Ex. 1-7 at 32-44 (list of gray whale and other scientific papers that NMFS relied on).

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<sup>3</sup> The Eastern Gray Whale (EGW) population is equivalent to the Eastern Breeding Stock, as described in the Declaration of John W. Bickham. The EGW is referred to as the Eastern North Pacific (ENP) stock of gray whales by NMFS in its Stock Assessment Reports (SARs) and by NMFS and the Tribe as the stock of gray whale for which a waiver is sought. The primary distinction made by the Tribe between the EGW and the ENP stock is that in the most plausible stock structure hypotheses developed in the IWC’s Rangewide Review, the EGW includes a Western Feeding Group (WFG) which utilizes summer feeding grounds off Sakhalin Island and the Kamchatka Peninsula that migrate to wintering grounds in the eastern North Pacific, while NMFS includes the WFG as part of the WNP stock. *See* Part I.C.3, below. For simplicity, these findings will refer to the ENP stock except when discussing the IWC’s stock structure hypotheses.

<sup>4</sup> The Western Gray Whale (WGW) population is equivalent to the Western Breeding Stock, as described in the Declaration of John W. Bickham. NMFS refers to the WGW as the Western North Pacific (WNP) stock of gray whales in its SARs. The primary distinction made by the Tribe between the WGW and the WNP stock is that in the most plausible stock structure hypotheses in the IWC’s Rangewide Review, the historic WGW (if it is not extinct) migrates and breeds solely in waters off Asia, while in NMFS’s SAR, WNP whales migrate from feeding grounds in the western North Pacific to wintering grounds in the eastern North Pacific. *See* Part I.C.3, below. For simplicity, these findings will refer to the WNP stock except when discussing the IWC’s stock structure hypotheses.

## 1. Eastern North Pacific Gray Whales.

56. The ENP stock of gray whales migrates from wintering grounds off Baja California, Mexico, along the continental shelf of western North America to and from summer feeding areas, which for most animals of the stock, lie in the Bering, Chukchi, and Beaufort Seas, including waters off North America and Russia. Bickham Decl. at 6; Weller Decl. ¶ 12; *see generally* NMFS Ex. 1-7 at 5-13. The ENP stock includes the PCFG feeding aggregation. *See* Part I.C.2 below.
57. In the most recent abundance estimate, which included surveys through the 2015-2016 migration, the ENP stock numbered 26,960 with 95% confidence that the true value lies between 24,420 to 29,830 animals. Ex. 1-7 at 15; Weller Decl. ¶ 25; NMFS Ex. 2-12 at 4.
58. NMFS calculated a potential biological removal (PBR) for the stock of 801 whales per year. Bettridge 2nd Decl. ¶ 5. PBR is defined as the “maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its [OSP].” 16 U.S.C. § 1362(20); Tr. V1 (Bettridge) at 93:6-13.
59. The ENP stock’s estimated abundance has varied over the past 50 years but has exceeded 15,000 whales for nearly 40 years. Despite significant declines in the late 1980s and during the 1999-2000 unusual mortality event, the stock recently achieved its highest estimated level. Weller Decl. ¶ 22; NMFS Ex. 2-12 at 4 (Figure 2); NMFS Ex. 1-7 at 15 (Table 1); Tr. V3 (Scordino) at 106:8-15; Tr. V2 (Bettridge) at 110:1-7.
60. The overall increase in the ENP gray whale population has occurred while Native communities on the Chukotka Peninsula of Russia have hunted over one hundred gray whales per year since the late 1990s. Scordino Decl. at 23. For the period 1985 to 2017, a total of 3,907 gray whales were harvested (including struck and lost whales), nearly all of which were taken by Chukotkan hunters. NMFS Ex. 3-87; Weller 2nd Decl. ¶ 12.
61. The ENP gray whale population is currently experiencing an “unusual mortality event,” or UME. Bettridge 3rd Decl. ¶¶ 10-11; Brandon UME Decl. at 3.
62. Since 1991, there have an average of 2.4 UMEs per year, affecting a variety of marine mammal stocks. Data from nearly 30 years of investigating UMEs in U.S. waters demonstrates that UMEs are not uncommon and that they occur somewhat uniformly across the NMFS stock assessment regions adjoining the lower 48 states. Brandon UME Decl. at 3.
63. The cause or causes of UMEs are often not determined, with approximately half (48%) of NMFS’s investigations ending without determining the cause or causes. *Id.*

64. Mortality events such as UMEs are expected to be more common where a species approaches the carrying capacity of the environment because it renders that species more sensitive to environmental fluctuations. In this respect a UME can sometimes serve as an expected correction in the abundance of a population that is at the limit of what the environment can support. *See* Tr. V2 (Brandon) at 215:14 – 216:11; Brandon UME Decl. at 10-11.
65. The most recent previous gray whale UME occurred in the 1999-2000. In that UME, it was estimated that the population fell from around 21,000 to around 16,000 animals. The cause was not determined. Tr. V1 (Yates) at 21: 8-10, 16-17.
66. The ENP population quickly recovered to its level directly preceding the UME by 2009 and grew to its current abundance estimate, which is approximately 27,000, by 2016. *Id.* at 22: 2-4; Brandon UME Decl. at 9.
67. During the 1999-2000 UME, the PCFG increased in abundance. Weller 3rd Decl. ¶ 8; Brandon UME Decl. at 6.
68. The 1999-2000 UME did not negatively impact WNP whales. Weller 3rd Decl. ¶ 9.
69. It is too early to know the number of whales (or percentage of the ENP population) that will be involved in the current UME or whether a cause will ultimately be determined, and it is likely to be at least several years until a cause is identified or a determination of lack of ability to attribute a cause is made. Brandon UME Decl. at 3.
70. While no cause has been determined, the current UME is consistent with what wildlife managers anticipate for a stock such as ENP that is at or near carrying capacity. Brandon UME Decl. at 10-11.
71. Counts of stranded whales in 2019 are between those recorded in 1999 and 2000, which suggests a UME of comparable size to 1999-2000. Brandon UME Decl. at 3. The size of the UME is determined in large part by analysis suggesting that whales found stranded represent only a fraction of those that actually die because most are either not found on the beach or sink at sea. Since 1999, the stranding network and data reporting has greatly improved, making it likely that a higher proportion of dead whales are now discovered. Tr. V3 (Scordino) at 89:5 - 90:1.

## **2. The Pacific Coast Feeding Group.**

72. Since the mid-1990s when the Makah Tribe sought to resume active whaling, substantial research has been conducted on gray whales that spend the summer and fall feeding season along the west coast off the contiguous United States and Canada. This large, collaborative study of PCFG whales is focused on photographing whales for photographic identification studies and biopsy sampling for genetic analyses. Scordino Decl. at 30-32.

73. The Makah Tribe, through marine mammal biologist Jonathan Scordino, has spent more than a decade conducting small boat surveys for gray whales to capture both photographs and genetic samples in the Tribe's U&A waters off the northern coast of Washington, with an average of 33 surveys during the feeding season and 10 during the migratory season. Scordino Decl. at 32-36 (describing research methodology); *see also* Tr. V3 at 41:16-20 (485 total surveys since 2007). This research has led to vast improvements in knowledge about PCFG whales, especially related to the feeding and movement behaviors and their population dynamics. Scordino Decl. at 63-64.
74. NMFS has adopted the IWC's definition for PCFG whales, which requires that a whale be observed in at least two years from June through November in the PCFG range (41°N to 52°N). Scordino Decl. at 36; *see also* NMFS Ex. 1-7 at 9 (Figure 3). Whales sighted only in Puget Sound are excluded from the PCFG. Scordino Decl. at 36 (citing Exs. M-0150, M-0047).
75. The PCFG definition was developed in an ad hoc manner, relying not on genetic differences, but rather on the location of surveys and collection of photographic and genetic samples on a regular basis. Scordino Decl. at 36. The definition, in turn, guides additional analysis of abundance estimates, mixing proportions,<sup>5</sup> and incidental human-caused mortality. *Id.*
76. Whales identified as members of the PCFG are routinely sighted north and south of the PCFG range during the summer-fall season, including a substantial number at Kodiak Island, and one PCFG whale was sighted on the northern feeding grounds off Barrow, Alaska. This suggests that PCFG whales – when not observed within the PCFG range during the feeding season – may be north (or possibly south) of the range on other feeding grounds. Scordino Decl. at 36-37.
77. To estimate the PCFG's abundance, scientists eventually concluded that an open-population model was the best fit for the PCFG's population dynamics because it was clear that immigration and emigration was occurring in the area in which abundance was being calculated, violating many of the assumptions required for closed population models. Scordino Decl. at 37-38 (describing evolution of PCFG abundance estimate modeling).
78. Currently, a modified Jolly-Seber model is used, which relies heavily on the history of a whale's photographic capture record. Scordino Decl. at 38. Based on this model and survey data through 2017, the current abundance estimate for the PCFG is 232 with a minimum abundance estimate (Nmin) of 212. NMFS Ex. 3-101 at 1, 33 (Table 17) (Calambokidis et al. 2019); *see also* Scordino Decl. at 39-42 (discussing Ex. M-0053, Calambokidis et al. 2017).

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<sup>5</sup> The concept of "mixing proportions," *i.e.*, the relative proportion of PCFG and non-PCFG whales in the proposed hunt area, and how it is used in management of the proposed hunt, is explained in the Declaration of Jonathan Scordino at 60-62.

79. The trend in PCFG abundance since the early 2000s has been described as “relatively stable but increas[ing] from 2010 to 2015 before decreasing slightly in 2016.” NMFS Ex. 3-101 at 1; Weller Decl. ¶ 26.
80. Despite years of research effort, there is still uncertainty in how whales recruit into the PCFG. Recruitment is the process of adding individuals to the population through births (internal recruitment) or immigration (external recruitment). Scordino Decl. at 44, 62.
81. There is substantial evidence of external recruitment to the PCFG through photographic catalogs. Between 1999 and 2015 an average of 37.2 whales not previously included in the catalog have been photographed each year; of these an annual average of 14.9 were observed in a subsequent year and are considered to have recruited. Scordino Decl. at 45-46 (explaining discovery effect analysis); Tr. V3 (Scordino) at 93:12 – 95:19 (updating written testimony re external recruitment based on Tables 13 and 14 of NMFS Ex. 3-101 and rebutting Schubert testimony).
82. Whales that are first observed as calves in the PCFG range and are seen in subsequent years provide evidence of internal recruitment. Scordino Decl. at 46-47.
83. Researchers have conducted simulation tests with a genetic model and concluded that the best estimate for the number of external recruits per year was four. Scordino Decl. at 48-49 (citing Ex. M-0176, Lang and Martien, 2012); Bickham Decl. at 21.
84. Based on current research, there is evidence to support both internal and external recruitment into the PCFG, but scientists have not yet been able to determine whether, or if, one mechanism predominates. Scordino Decl. at 45, 49; *see also* Weller Decl. ¶ 27.
85. PCFG whales feed throughout the water column, from benthic prey (bottom sediment) to epibenthic prey (just above the bottom sediment) and pelagic prey (in the water column). Although gray whales are uniquely adapted for benthic suction feeding, it is recognized that they have plasticity in their feeding behavior, a key survival mechanism. Scordino Decl. at 51.
86. Feeding behavior – driven by the quantity and quality of prey in an area – is a significant factor in gray whale distribution throughout their range, including in the PCFG area and the Makah U&A. Scordino Decl. at 52; Tr. V5 (Villegas-Amtmann) at 195: 17-20 (agreeing that “whales go where the food is.”); Newell Rebuttal Decl. ¶¶ 30-31, 33, 36, 39; Tr. V5 (Newell) at 74:14 – 75:14, 76:13 – 77:14.
87. Studies of body condition and the correlation between the number of days a whale is observed and the likelihood of observations in the next year suggest that feeding success is the primary factor dictating whether a whale will return to the PCFG during the next feeding season. Scordino Decl. at 52-53.



88. Photo-identification studies and more limited satellite telemetry studies indicate that PCFG whales exhibit a high degree of variability in their distribution within – and sometimes to the north of – the PCFG range. Scordino Decl. at 53-55 (discussing studies in which half or more of PCFG whales demonstrated a 75% inner quantile of greater than 60 nautical miles); Tr. V4 (Scordino) at 9:11-21.
89. The Tribe’s own studies in the Makah U&A are consistent with a high level of interannual variability in site use by PCFG whales. Scordino Decl. at 55-57 (most gray whales in Makah U&A “show little to no fidelity to the area within and between feeding seasons”) (citing Ex. M-0262, Scordino et al. 2017).
90. Fluctuations in numbers and distribution of gray whales in the PCFG range and on the northern feeding grounds are likely to continue based on changes in the quality and quantity of prey available. Scordino Decl. at 59.
91. Genetic studies of PCFG and ENP gray whales to better understand stock structure have shown small but statistically significant differences in haplotype frequencies of mitochondrial DNA (mtDNA). Scordino Decl. at 59-60; Bickham Decl. at 20; Weller Decl. ¶ 18. No significant differences were found when evaluating nuclear DNA. *Id.*
92. Together, these studies suggest that at least some PCFG whales recruit into the feeding aggregation via a mechanism of matrilineal fidelity to the PCFG range, *i.e.*, PCFG mothers bring their calves to the PCFG range and they tend to rely on this learned behavior in returning in subsequent years. Bickham Decl. at 19-22. The lack of a nuclear DNA differences indicates that PCFG whales breed indiscriminately with both PCFG and ENP whales, and do not breed primarily with other PCFG whales. *Id.* at 20; Bettridge Decl. ¶ 16.
93. The substantial overlap of the PCFG and ENP range provides opportunities for genetic exchange, and there is no clear biological benefit for selective mating among PCFG whales. Bickham Decl. at 20-22.
94. NMFS convened a task force of agency marine mammal scientists in 2012 to evaluate several lines of evidence bearing on the issue of gray whale stock structure as defined under the MMPA. Weller Decl. ¶ 7, 17; Bettridge Decl. ¶ 15; Scordino Decl. at 74-77.<sup>6</sup>
95. With respect to the status of the PCFG as a stock, the task force concluded that the best scientific evidence available contained “substantial uncertainty” and that the PCFG’s stock status “remained unresolved.” Weller Decl. ¶ 19. Consistent with this conclusion, NMFS continues to recognize the PCFG as a feeding aggregation that is part of the larger ENP stock. *Id.* ¶ 20; Bettridge Decl. ¶¶ 19-20; NMFS Ex. 2-12 at 3, 8.

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<sup>6</sup> Mr. Scordino’s testimony provides a detailed summary of the 2012 NMFS gray whale task force, including the questions and responses by participating scientists and how they relate to the criteria for identifying a population stock under the MMPA and NMFS’s guidelines.

96. The PCFG does not qualify as a population stock under the MMPA because members of the PCFG do not “interbreed when mature” to the degree necessary to allow the population to become differentiated in their nuclear DNA. Bickham Decl. at 31.

### 3. Western North Pacific Gray Whales

97. The western population of gray whales historically migrated along the coasts of Korea, China, and Japan to and from summer feeding areas in the Sea of Okhotsk. Bickham Decl. at 8; Weller Decl. ¶ 33.
98. Although some scientists speculated that the ENP and WNP stocks could have overlapping feeding ranges, until very recently, it was a fundamental understanding of gray whale biologists that the two populations had separate wintering grounds on opposite sides of the ocean. Scordino Decl. at 64; Weller Decl. ¶ 34.
99. Some scientists considered the western population to be extinct by the mid-1960s, but observations in the 1970s and 1980s of gray whales in the stock’s historic feeding area of the Sea of Okhotsk gave rise to a presumption that these whales were part of a remnant of the historic western population, though some acknowledged that they could be migrants from the eastern North Pacific. Bickham Decl. at 8; Scordino Decl. at 65 (discussing Ex. M-0022, Blohkin et al. 1985).
100. As with other gray whale populations, an extensive research effort ensued to better understand this population, which unlike the ENP stock had not recovered from commercial whaling and remained at low abundance levels. Scordino Decl. at 66.
101. Satellite telemetry data from three whales tagged off of Sakhalin Island in 2010 and 2011 upended the widely held theory that gray whales feeding at Sakhalin Island migrated solely along the coast of Asia because, these whales migrated to their wintering grounds by traveling east, not south, to North America. One whale was tracked for more than a year on a round-trip to the Baja lagoons and back to Sakhalin Island the following spring. Bickham Decl. at 9-10; Scordino Decl. at 67-68.
102. Subsequent comparisons of genetic samples and photographic catalogs for additional trans-basin matches have revealed approximately 30 individual gray whales recorded both at Sakhalin Island and in the eastern North Pacific. Scordino Decl. at 67-68; Weller Decl. ¶ 34.
103. These discoveries led to a scientific debate on the status of western gray whales, raising questions as to the continued existence of the historic western gray whale, the possibility that ENP gray whales had expanded their feeding range to include Sakhalin Island, and a hybrid theory that the gray whales at Sakhalin were a mixed stock aggregation of both groups. Scordino Decl. at 68; *see also id.* at 66 (uncertainty in identity of “Sakhalin whales”).

104. Genetic analyses of western gray whales indicate that whales that summer off Sakhalin Island demonstrate statistically significant differences in haplotype frequencies (from maternally inherited mtDNA) and microsatellite allele frequencies (from biparentally inherited nuclear DNA) from eastern gray whales. Bickham Decl. at 9, 12.<sup>7</sup>
105. A close evaluation of earlier genetic studies of western gray whales suggests an unclear picture of population structure. Bickham Decl. at 12-15.
106. Some of the evidence points to two demographically distinct populations of drastically different sizes and numbers of breeding females, while the nuclear DNA evidence shows a low level of differentiation based on a small number of loci. Bickham Decl. at 14-15, 17, 30.
107. Other evidence, *e.g.*, comparison of mtDNA haplotypes in the two populations, suggests the western gray whales became isolated recently and the mtDNA differences are due to a founder effect from a small group of eastern gray whales. Bickham Decl. at 12-15 (contrasting the haplotype network of the isolated eastern and western stocks of Steller sea lions to eastern and western gray whales).
108. More recent analyses of biopsy samples have applied genomics, advances in sequencing methods, and bioinformatics. These studies identified the presence of two genomes (eastern and western) found at different frequencies at both the Sakhalin feeding grounds and Mexican wintering grounds as well as the presence of admixed individuals in both areas. Bickham Decl. at 16-17 (citing Ex. M-0411, Bruniche-Olsen et al. 2018).
109. Based on these and other studies the Sakhalin feeding area experiences considerable immigration and admixture of the two genomic lineages. Bickham Decl. at 17.
110. Considering the genetics studies as a whole, the weight of the evidence suggests that Sakhalin whales are comprised of two groups, both of which are likely to have been recently derived from the eastern gray whale population. Bickham Decl. at 19.
111. In response to the new information about the movement of gray whales from the western to the eastern North Pacific, the IWC Scientific Committee convened a series of five workshops between 2014 and 2018 known collectively as the Rangewide Review. Bickham Decl. at 22-23.
112. Among the objectives of the Rangewide Review workshops was to review available scientific information and “reappraise the population structure and movements of North Pacific gray whales with a focus on examining status.” Bickham Decl. at 23; *see also* Scordino Decl. at 69-70.

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<sup>7</sup> *See also* Bickham Decl. at 10-12 for an explanation of genetics methods and terms relevant to gray whale population structure.

113. The Rangewide Review developed a series of plausible stock structure hypotheses for later use in population models. Bickham Decl. at 23; *see also* Scordino Decl. at 69-70.
114. By the conclusion of the five-year review, two high-priority hypotheses considered the most plausible had been developed – 3a and 5a. *Id.* Hypotheses 3a includes a single (eastern) breeding stock that winters in Mexico, identifies all of the whales at Sakhalin as the Western Feeding Group (WFG) and part of the Eastern Breeding Stock (EBS), and considers the historic Western Gray Whale (WGW) population to be extinct. In Hypothesis 5a, the whales at Sakhalin are a mixed stock aggregation, comprised of an EBS which migrates to Mexico and a WBS which migrates to Asian wintering grounds. Bickham Decl. at 23.
115. Under both high-priority hypotheses, whales that migrate from Sakhalin to North America and have the potential to be encountered in the Makah Tribe’s hunt are WFG whales, *i.e.* they are a feeding group of eastern gray whales rather than the historic WGW. Bickham Decl. at 26.
116. Only one of the hypotheses developed by the Rangewide Review – 6b – involved historic WGW migrating to North America. This hypothesis is the least plausible of those developed by the Rangewide Review. Bickham Decl. at 26; Scordino Decl. at 70.
117. The methods for estimating abundance of western gray whales have evolved along with the scientific understanding of their migratory movements and stock structure. In the most recent assessment, whales observed off the southeastern Kamchatka Peninsula are included in the abundance estimate. Bickham Decl. at 7; Weller 2nd Del. ¶ 30.
118. The western gray whale population was estimated to total 290 whales (excluding calves) in 2016, with a 90 percent confidence interval of 271 to 311 whales. Bettridge 2nd Decl. ¶ 7 (citing NMFS Exs. 2-12, 2-13, and 3-89).
119. Based on the most recent assessments, the IUCN reclassified the western gray whale from critically endangered to endangered. The IUCN also determined that if a western breeding population, *i.e.*, the historic western gray whale, still exists, it would have fewer than 50 mature individuals, corresponding to a classification of critically endangered. Bickham Decl. at 7-8; NMFS Ex. 3-89 at 2 (“it is unclear whether a specific wintering ground still exists in Asian waters”).
120. The IUCN also concluded that the gray whales summering off Sakhalin and southeastern Kamchatka may constitute a demographically self-contained unit where mating occurs at least preferentially, and possible exclusively. NMFS Ex. 3-89 at 2.
121. When the ENP stock was delisted under the Endangered Species Act in 1994, NMFS described the gray whales that remained listed – the “western North Pacific (Korean)

- population” as geographically isolated from the ENP stock and the remnant of an historic western breeding stock that had not recovered from the effects of commercial whaling. 59 Fed. Reg. 31094 (June 16, 1994).
122. The 2018 SAR for the WNP stock states that “[t]he WNP stock is listed as ‘Endangered,’” explains that at the time of delisting the ENP stock, “the WNP stock was thought to be geographically isolated from the ENP stock,” and provides NMFS’s rationale for “identifying two separate stocks of North Pacific gray whales.” NMFS Ex. 2-12 at 14.
  123. At the time of delisting, the whales that remained listed were thought to be the remnant of the historic western gray whale. Tr. V2 (Weller) at 52: 11-25. NMFS did not explain the basis for the SAR’s description of the current WNP stock as endangered. *Id.* at 51:11-52:17; Bettridge Decl. ¶ 14.
  124. The stock structure hypotheses 3a and 5a from the IWC’s Rangewide Review are presented in the SAR as the best available science to inform the SAR for the WNP gray whale stock. Tr. V2 (Weller) at 47:15-49:9.
  125. The SAR does not disagree with the hypotheses or address the question whether the current western gray whales that migrate to North America are descendants of the historic western gray whale. Tr. V2 (Weller) at 47:15-49:9.
  126. The stock structure hypotheses developed by the Rangewide Review – particularly hypotheses 3a and 5a – represent the best scientific evidence available regarding the stock structure of North Pacific gray whales. Tr. V2 (Bickham) at 171:20 – 172:5, 180:23 – 181:5.

#### **D. FACTS REGARDING THE MMPA’S REQUIREMENTS FOR A WAIVER.**

In addition to Proposed Findings of Fact under Part I.C above, the following proposed findings relate to the specific criteria for a waiver of the take moratorium under the MMPA, 16 U.S.C. § 1371(a)(3)(A).

##### **1. Distribution and Abundance.**

127. NMFS’s determination that the PCFG is part of the larger ENP stock of gray whales is supported by substantial evidence in the record. *See* Tribe’s Post-Hearing Br. Part V.B.
128. Even though the PCFG is not a stock, NMFS has included numerous provisions in the proposed regulations that specifically protect PCFG whales and ensure that gray whales will continue to be a significant functioning element of the ecosystem in the PCFG range. *See* Proposed Findings of Fact 249-50, 252-53, 259-66.

129. The maximum number of gray whales that could be killed in Makah hunts over the 10-year wavier would be 25, or an average of 2.5 per year. Yates Decl. ¶¶ 32-33; Weller Decl. ¶ 38.
130. An average of 2.5 whales per year represents 0.015% of the stock population of 16,033 following the 1999-2000 UME, and 0.009% of the 2016 abundance estimate of 26,960 whales. NMFS Ex. 1-7 at 15.
131. The annual Makah hunt removal level is more than three orders of magnitude less than the 2016 estimate's 95% confidence interval (5,410 whales), so the impact of the hunt could not even be detected in NMFS's regular population assessments. NMFS Ex. 1-7 at 15.
132. Removing 2.5 whales per year is a tiny fraction (0.3%) of the 2016 PBR (Potential Biological Removal) of 801 whales per year. NMFS Ex. 2-12 at 5.
133. The best available scientific evidence demonstrates that the Makah treaty hunt will have no material effect on the ENP stock's abundance. NMFS Ex. 1-7 at 15; NMFS Ex. 2-12 at 5.
134. Chukotka Natives have both the need and the capability to take up to 140 gray whales per year, and are likely to take any whales not hunted by the Makah Tribe under the shared IWC catch limit between the United States and Russia. Tr. V5 (Tillman) at 234:4 – 235:9; Weller Decl. ¶ 9; Scordino Decl. at 23, 97; Weller 2nd Decl. ¶ 12; Tr. V4 (Scordino) at 11:21 – 12:5; Ex. M-0311 at 4; NMFS Ex. 3-87; Scordino Cross Ex. SS-02 at 16.
135. Between 1998 and 2018, the Chukotkans took all but 11 of the 2,604 gray whales that were available under the IWC-approved catch limits during that 21-year period, an average of 123.4 per year. This included most of the 84 whales allocated to Makah, and a total of 143 whales in 2012. NMFS Ex. 3-87; Scordino Cross Ex. SS-02 at 16.
136. An estimated 1,700 to 5,500 gray whales may have died in 2019 as a result of the current UME. Tr. V1 (Yates) at 20:1-17. This estimate is based on the expectation that 3.9 to 13% of dead whales are discovered. *Id.* Because of improvements in the stranding network and reporting since 1999, it is likely that the percentage of dead whales that are discovered has increased, and in turn that the current UME may be smaller than estimated. Tr. V3 (Scordino) at 89:5 to 90:1.
137. Notwithstanding the loss of ENP gray whales in the UME, the proposed Makah hunt would have no discernible effect on the ENP's abundance given the small impact of removing 2.5 whales per year from the lowest ENP abundance in the past 20 years following the 1999-2000 UME. NMFS Ex. 1-7 at 15.

138. All of the available evidence indicates that hunting activities, including approaching with one or more vessels, harpooning and shooting a rifle, do not affect the distribution of gray whales at the population level. Scordino Decl. at 23-27; Weller Decl. ¶ 47; NMFS Ex. 1-7 at 31; Tr. V4 (Scordino) at 6:1-14.
139. Substantial evidence demonstrated that the non-lethal activities associated with Makah hunting and training are similar to scientific research methods – such as approaching a whale to obtain photographs or to collect a small piece of blubber and skin by shooting the whale with a biopsy dart – or approaches by whale watching vessels, and will not have a material effect on the ENP stock’s distribution. Any effects are most likely to be short-term, temporary and specific to the location of the activity. Scordino Decl. at 27-29; Tr. V3 (Scordino) at 72:19-74:15, 92:3-6, 129:8-19; Weller Decl. ¶¶ 45-52; Tr. V5 (Villegas-Amtmann) at 183: 4-9.
140. The most recent abundance estimate for the PCFG is 232 animals as of 2017. NMFS Ex. 3-101 at 1, 33 (Table 17).
141. The limit of 16 strikes on PCFG whales and 8 strikes on PCFG females over 10 years and the low abundance threshold will ensure that PCFG whales will not fall below the stable or increasing abundance level observed since 2002. Weller Dec. ¶¶ 26, 56; Moore Decl. ¶¶ 19-25; Scordino Decl. at 63.
142. The loss of whales in the PCFG range due to hunting may allow prey to flourish and lead to more whales recruiting into the group thus compensating for losses due to whaling. Scordino Decl. at 63, 102; Tr. V3 (Scordino) at 53:4 – 58:22.
143. There is no evidence that the UME that began in 2019 is affecting PCFG whales, and during the previous UME, the PCFG experienced a pulse of immigration increasing its abundance. Brandon UME Decl. at 6; Scordino Decl. at 39-40; *see also* Tr. V2 (Brandon) at 230:11-14 (“I don’t know that there’s any indication that I’ve seen or heard of so far that [the current UME] would have greater impact on the PCFG.”).
144. One stranded whale in 2019 has been matched to the Cascadia Research Collective (CRC) catalog of PCFG whales, but this does not indicate a substantial die-off of PCFG whales because several stranded whales in the PCFG range are observed in non-UME years. *See* Tr. V1 (Yates) at 82:14-16; Tr. V3 (Scordino) at 88:2 – 89:4.
145. The distribution of PCFG whales is highly variable and is primarily dependent on the availability and quality of prey. Scordino Decl. at 52-53, 55; NMFS Ex. 3-101 at 42-43 (Figures 8 & 9); Ex. M-0171; Ex. M-0262; Tr. V3 (Scordino) at 238:16-21.
146. PCFG distribution is unlikely to be materially affected by activities associated with the Makah hunt. *See* Tribe’s Post-Hearing Br. Part V.C.1.b.

## **2. Breeding Habits.**

147. The hunt is unlikely to have a noticeable effect on the ENP stock's breeding habits. *See* Tribe's Post-Hearing Br. Part V.C.2.

### **3. Times and Lines of Migratory Movements.**

148. The proposed hunt would not have any material effect on ENP gray whale migratory movements. *See* Tribe's Post-Hearing Br. Part V.C.3.

### **4. Consistency with the MMPA's Purposes and Policies.**

149. The Makah hunt (25 strikes over 10 years) will not cause the abundant ENP stock (nearly 27,000 animals in 2016) to fall below its OSP level. *See, e.g.*, Weller Decl. ¶ 40; Scordino Decl. at 30.
150. The IWC Scientific Committee's 2018 evaluation of the proposed hunt following the five-year Rangewide Review demonstrate that by satisfying the IWC's conservation objectives, the proposed hunt also meets the MMPA's objective of achieving or maintaining OSP for all potentially affected groups of gray whales – ENP, WNP, and PCFG. Brandon Decl. at 44; *see also* Scordino Decl. at 82; Part I.F.2 below.
151. The proposed waiver will not materially affect the health and stability of marine ecosystems, including the smallest recognized ecosystem which encompasses the hunt area, the northern California Current ecosystem. Weller Decl. ¶¶ 68-70.
152. The northern California Current ecosystem, which corresponds roughly to the PCFG range from northern California to Vancouver Island, is “shaped by dynamic, highly energetic, large-scale processes.” Weller Decl. ¶¶ 68, 70.
153. The role of gray whales in structuring the northern California Current ecosystem is comparatively small, and the hunt would remove few animals relative to their current abundance. Weller Decl. ¶ 70.
154. At the scale of the hunt area (the northern Washington coast), the proposed hunt would not have a significant effect on the health or functioning of the marine environment. Weller Decl. ¶¶ 71-73.
155. The Strait of Juan de Fuca, which is outside the hunt area, is subject to similar large-scale processes as ecosystems within the migratory range of the ENP stock, and the effect of the hunt there would also be minimal. *See* Tr. V3 (Scordino) at 98:2-10, 210:12-17; Tr. V2 (Weller) at 88:8-24.
156. Based on the small number of whales removed under the waiver (among other highly conservative measures), the IWC's evaluation of the proposed hunt which included the potential for future UMEs, and the provisions for adaptive management over the 10-year term of the waiver, the waiver should proceed without any delay due to uncertainty related to the current UME. *See* Tribe's Post-Hearing Br. at V.C.5.



## **E. FACTS REGARDING THE MMPA'S REQUIREMENTS FOR REGULATIONS FOR THE TAKING OF MARINE MAMMALS.**

In addition to Proposed Findings of Fact under Part I.C above, the following proposed findings relate to the criteria for promulgating regulations governing the take of marine mammals under the MMPA, 16 U.S.C. § 1373(a), (b).

### **1. Existing and Future Levels of the ENP Stock.**

157. NMFS fully considered the effects of the proposed regulations on the existing and future levels of the ENP gray whale stock. *See* Tribe's Post-Hearing Brief Parts V.D.1, V.C.1.

### **2. United States International Treaty and Agreement Obligations.**

158. NMFS fully considered the effects of the proposed regulations on existing international treaty and agreement obligations of the United States. *See* Tribe's Post-Hearing Brief Part V.D.2.

### **3. Marine Ecosystem and Related Environmental Considerations.**

159. NMFS fully considered the effects of the proposed regulations on the marine ecosystem. *See* Tribe's Post-Hearing Brief Part V.D.3.

### **4. Conservation, Development and Utilization of Fishery Resources.**

160. The proposed regulations would have no effect on the conservation, development, or utilization of fishery resources. Yates Decl. ¶ 60.

### **5. Economic and Technological Feasibility of Implementation.**

161. NMFS fully considered the economic and technological feasibility of implementation of the proposed regulations. *See* Tribe's Post-Hearing Brief Part V.D.4.

### **6. Risk to WNP Gray Whales.**

162. NMFS fully considered the effect of the proposed regulations on the WNP stock of gray whales by evaluating both: (1) The probability of encountering a WNP gray whale (exposure) during an ENP gray whale hunt or training; and (2) the likelihood that an encounter would kill or otherwise harm a WNP whale. *See* Tribe's Post-Hearing Brief Part V.D.5.

163. NMFS conducted a probability analysis based on currently available scientific information of the potential for Makah hunt activities to encounter a WNP gray whale. Moore 2nd Decl. ¶ 8; NMFS Ex. 4-15 at 12-13.
164. NMFS's analysis demonstrated that the probability of striking a WNP whale in 10 years was 7.4%, which is equivalent to one strike every 135 years if the regulations continued in perpetuity, the maximum number of strikes were made, and the WNP, ENP, and PCFG population sizes remained constant. Moore 2nd Decl. ¶ 8; NMFS Ex. 4-15 at 12-13.
165. NMFS's analysis demonstrated that the probability of an unsuccessful harpoon attempt on a WNP whale in 10 years was 36.5%, which is equivalent to one such attempt every 27 years if the regulations continued in perpetuity, the maximum number of unsuccessful harpoon attempts were made, and the WNP, ENP, and PCFG population sizes remained constant. NMFS Ex. 4-15 at 12-13.
166. NMFS's analysis demonstrated that the probability of approaching a WNP whale in a year is 82%, which is equivalent to 18 such approaches over 10 years if the regulations continued in perpetuity, the maximum number of approaches were made, and the WNP, ENP, and PCFG population sizes remained constant. NMFS Ex. 4-15 at 12-13.
167. NMFS's analysis of the probability of an approach of a WNP whale reflects the conservative (and unrealistic) assumption that all 353 approaches allowed under the regulations will occur in the migratory season. NMFS Ex. 4-15 at 12 n.3; *see also* Tr. V2 (Moore) at 143:16 – 144:8; Yates Decl.¶ 29.
168. Non-lethal encounters of WNP whales involving unsuccessful harpoon attempts and approaches during hunt activities would most likely result in short-term impacts on the affected whales and would not have any material impact on their health and behavior. *See* Proposed Finding of Fact 139 above (for ENP whales); Tribe's Post-Hearing Brief Part V.C.1.
169. The IWC Scientific Committee's 2018 review of the proposed hunt concluded that it satisfied the IWC's conservation objectives for WNP whales, which means that it will also satisfy the MMPA's objective of achieving or maintaining OSP for WNP whales. Brandon Decl. at 9, 14-15, 44; Scordino Decl. at 102-03.
170. The gray whales that migrate from the western North Pacific to North America and may be encountered in the Makah hunt are not members of the historic western gray whale population. *See* Proposed Findings of Fact 111-26 above; Tribe's Post-Hearing Brief Part V.D.5; Scordino Decl. at 102-03; Bickham Decl. at 19; Tr. V2 (Bickham) at 171:20 – 172:5, 180:23 – 181:5.
171. The gray whales that migrate from the western North Pacific to North America and may be encountered in the Makah hunt are not part of the WNP stock that remains

listed as endangered under the Endangered Species Act. *See* Scordino Decl. at 102-03; Tribe’s Post-Hearing Brief Part V.D.5.

**F. FACTS REGARDING THE INTERNATIONAL WHALING COMMISSION’S SCIENTIFIC REVIEW OF THE TRIBE’S PROPOSED HUNT AND APPROVAL OF GRAY WHALE CATCH LIMITS.**

**1. Aboriginal Subsistence Whaling Catch Limits for ENP Gray Whales.**

172. The International Whaling Commission (IWC) regulates the harvest of ENP gray whales and other large whales by Native communities under a category of whaling termed “aboriginal subsistence whaling” (ASW). Weller Decl. ¶ 6; *see also* ALJ Ex. 006 at 1-28 to 1-35 (2015 Draft EIS).
173. A “catch limit” (previously known as a quota) for ASW is obtained by a member government after presenting a needs statement on behalf of the Native community and requesting a catch limit for the relevant whale stock. Weller Decl. ¶ 6.<sup>8</sup>
174. Catch limit requests are reviewed by the IWC’s Scientific Committee and the ASW Sub-committee and, if approved by the IWC, are included in Paragraph 13 of a legally binding Schedule to the International Convention for the Regulation of Whaling (ICRW). *Id.*; ALJ Ex. 006 at 1-28.
175. In 1997, the IWC approved a catch limit for ENP gray whales based on a joint request by the United States (on behalf of the Makah Tribe) and the Russian Federation (on behalf of Chukotka Natives). Arnold Decl. ¶ 14; Tillman Rebuttal Decl. ¶¶ 11-12; ALJ Ex. 006 at 1-31 to 1-33.
176. The catch limit was for a five-year block (1998-2002) for a total of 620 ENP gray whales with an annual limit of 140. Tillman Rebuttal Decl. ¶ 12.
177. Similar gray whale catch limits were approved by the IWC in 2002 (for 2003-2007) and in 2007 (for 2008-2012), and a six-year block catch limit was approved in 2012 (for 2013-2018). Tillman Rebuttal Decl. ¶ 14.
178. Annual bilateral agreements between the United States and Russia allocate the catch limit and set annual limits of five whales for the Makah Tribe and 135 whales for the Chukotkans. Weller Decl. ¶ 9.
179. In total, over a period of 21 years, the Makahs and Chukotkans shared a catch limit which provided for an average total harvest of 124 whales (120 for the Chukotkans and 4 for the Makahs) and an annual maximum harvest of 140 whales (135 for the Chukotkans and 5 for the Makahs). Weller 2nd Decl. ¶ 12.

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<sup>8</sup> Examples of the Makah Tribe’s Needs Statements submitted to the IWC by the United States are available at ALJ Ex. 006 at App. A (App. A, 2002 Needs Statement) and Reid Decl. Doc. No. 55 at PDF 2076-2200 (Renker, 2018 Needs Statement).

180. The bilateral agreements include a mechanism for the transfer of unused whales, and the United States has previously assigned gray whales not used by the Makahs to Russia for use by the Chukotkans. Weller Decl. ¶ 9 (citing NMFS Exs. 3-5 to 3-8). This practice is likely to continue in the future. *See* Weller 2nd Decl. ¶ 12.
181. With the exception of the most recent block period, the Chukotkans have harvested nearly all of the total number of gray whales available under the shared catch limit. *See* NMFS Ex. 3-87; Scordino Cross Ex. SS-02.
182. For the 1998-2002 block period, when Makah hunted one whale (in 1999), the Chukotkans struck 606 of the 619 available. NMFS Ex. 3-87 at 2-3.
183. For the 2003-2007 block period, the Chukotkans struck 628 whales, more than the 619 available (Makah took one whale in the 2007 unauthorized hunt). *Id.* at 3.
184. For the 2008-2012 block period, the Chukotkans struck 635 gray whales (of 620 available). *Id.* at 3-4.
185. The 2013-2018 block period catch limit was anomalous in that the Chukotkans only harvested 107 whales in the final year of the block, their lowest total for any year since 1998. *See* Scordino Cross Ex. SS-02 at 16.
186. For the most recent block period (2013-2018), the Chukotkans struck 722 of the 744 whales available for the six-year period. *Id.* at 12-16; Tr. V3 (Scordino) at 173:3-7).
187. The low Chukotkan harvest in 2018 was likely due to a misunderstanding by Russia of the block catch limit and the operation of the bilateral agreement. Tr. V4 (Scordino) 11:14-12:5; Ex. M-0311 at PDF 4 (Russian IWC document mistakenly indicating only 105 whales remained for 2018); *see also* NMFS Ex. 3-87 at 4 (Chukotkan harvest of 143 in final year of 2008-2012 block period in excess of the then-applicable annual limit).
188. For the 21 years in which the Tribe has been part of a shared gray whale catch limit, the Chukotkans harvested 2,591 whales, which is an average of 123.4 whales per year. Accounting for the two whales struck by the Tribe in 1999 and 2007, only 11 gray whales were not used from the aggregate catch limit over this time period – the equivalent of one-half of a whale per year. In other words, of the 84 whales allocated to Makah in that time, the Tribe took two and the Chukotkans took 71. *See* Scordino Cross Ex. SS-02.
189. At the 2018 biennial meeting, the IWC approved all requested ASW catch limits for a period of seven years. Weller Decl ¶ 9; NMFS Ex. 3-3 at 10 (IWC Schedule, Paragraph 13 amendments for gray whales).

190. Among several changes relevant to the ASW hunts, the IWC approved an increase in the annual limit for ENP gray whales based on greater Chukotkan need and their occasional harvest of inedible “stinky” whales for a total of 140 per year, or 980 over the 7-year block catch limit. Weller Decl. ¶ 9; Tr. V5 (Tillman) at 233:11-234:14.
191. Under the 2018 Schedule amendment and U.S.-Russia bilateral agreement, up to five whales are available to Makahs and up to 135 whales are available for the Chukotkan hunt each year for the 2019-2025 block period. NMFS Ex. 3-4.
192. The Chukotkan hunters have the capability to harvest the increased number of whales (up to 140 per year), which they had requested based on their stated need and other factors. Tr. V5 (Tillman) at 234:4-235:9; *see also* NMFS Ex. 3-87 at 4 (total Chukotkan harvest of 143 gray whales in 2012).
193. It is likely that any ENP gray whales not harvested by the Makah Tribe under the current shared catch limit (and any authorizations under United States law) will be transferred to the Chukotkans, who will kill all (or nearly all) of them.<sup>9</sup> *See* Tr. V5 (Tillman) at 234:4-235:9.

## **2. The Scientific Committee’s Review of the Proposed Hunt (2010-2018).**

194. The IWC Scientific Committee is composed of internationally recognized, leading experts in large whale population biology, ecology, genetics, and population dynamics modeling who provide management advice and make recommendations to the IWC. Brandon Decl. at 23-24, 44; Tr. V2 (Brandon) at 205:23-25. The IWC Scientific Committee is “highly regarded [and] considered to be the premier body for whale science . . . in the world,” according to Dr. Michael Tillman, who has more than 40 years of experience at IWC and is a former Chair of the Scientific Committee. Tr. V5 at 232:23-233:1; *see also* Tr. V4 (Schubert) at 43:11-12 (“AWI has great respect for the work of the Scientific Committee.”).
195. The IWC Scientific Committee uses population dynamics models and computer simulations in an approach known as “Management Strategy Evaluation” (MSE) to evaluate proposed ASW hunt plans. Brandon Decl. at 16-19; Tr. V2 (Brandon) at 207:11-13.
196. Proposed Makah hunt plans have been through the MSE process at the IWC both in 2010-2013 and in 2018 at the conclusion of the five-year Rangewide Review. Brandon Decl. at 23-27, 33-44.
197. The IWC Scientific Committee’s evaluations and conclusions regarding ASW hunt plans generally both take into account and comprise the best available science relative

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<sup>9</sup> One of the changes in 2018 was to add a “car[r]y forward” provision to the gray whale and other ASW catch limits. NMFS Ex. 3-3 at 10. This provision allows unused strikes to be utilized in future years, up to a certain limit above the annual cap on strikes. As a result, the full number of strikes are more likely to be utilized over time.

- to the whale stock involved, information about the proposed hunt, and related impacts to the affected whales. Tr. V2 (Brandon) at 208:7-13; Brandon Decl. at 44.
198. The IWC Scientific Committee has interpreted the management objectives for ASW whaling, as established by the IWC, into the following three principles:
- (1) Ensure that the risks of extinction to individual stocks are not seriously increased by subsistence whaling;
  - (2) Enable aboriginal people to harvest whales in perpetuity at levels appropriate to their cultural and nutritional requirements, subject to the other objectives; and
  - (3) Maintain the status of stocks at or above the level giving the highest net recruitment and to ensure that stocks below that level are moved towards it, so far as the environment permits.
- Brandon Decl. at 13.
199. Under the third IWC conservation objective, the abundance level resulting in the “highest” or “maximum” net recruitment is a key reference population level for management of aboriginal subsistence whaling under the IWC’s conservation management objectives, which the IWC refers to as the “maximum sustainable yield level” (MSYL). *Id.* at 13-14.
200. Under identical assumptions regarding the mathematics of population dynamics, MSYL is equivalent to “maximum net productivity level” (MNPL) under the MMPA. *Id.* at 14.
201. MNPL, in turn, is the abundance level at the lower bound of the range considered to satisfy the OSP management objective of the MMPA. *See* 50 C.F.R. § 216.3.
202. The MMPA and IWC conservation objectives are effectively identical with respect to the MNPL/MSYL criteria and can be jointly summarized as limiting the extent of human caused mortality such that the goal of maintaining or recovering stocks to population levels at or above MNPL, *i.e.*, their OSP level, will be achieved. *See* Brandon Decl. at 14; Tr. V2 (Brandon) at 208:3-6.
203. Dr. Brandon, who is a member of the IWC Scientific Committee, Brandon Decl. at 6, testified to this point in written direct testimony and oral testimony, and was not contested in this regard by any party.
204. An important component of the IWC’s MSE process is an “Implementation Review,” in which the IWC’s Scientific Committee considers the status of gray whale stocks and any new science. Brandon Decl. at 17. These reviews are scheduled on a regular basis, typically every 5 to 6 years but they may be called more frequently if new information warrants. *See id.*; Tr. V2 (Weller) at 95:7-15.

205. The goal of an Implementation Review is to determine if any of the new information indicates that the current state of nature is outside the bounds of plausibility considered to date. Brandon Decl. at 17.
206. The Implementation Review is a form of adaptive management and serves a similar purpose as the regular updating and review of Stock Assessment Reports (SARs) under the MMPA. *Id.*
207. Candidate management strategies for ASW whaling are effectively hunt management plans and consist of catch control rules for the ASW hunt and data collection schemes. Collectively, this is known in IWC parlance as a Strike Limit Algorithm (SLA). *Id.* at 18.
208. The Gray Whale SLA was subject to an MSE in 2010 and about five years earlier. *Id.*
209. From 2010-2013, the IWC Scientific Committee convened an Implementation Review focused on the impacts of the Makah hunt proposed in 2005 on PCFG whales. *Id.* at 23-24.
210. This review allowed the Scientific Committee to evaluate impacts to the PCFG as a management unit using a variety of both reasonable and unlikely variables through computer simulations of 119 trials. *Id.* at 24. Considering all these variables, the Scientific Committee agreed that the proposed 2005 Makah hunt plan met the conservation management objectives of the IWC for aboriginal subsistence whaling. *Id.* at 26.
211. During the course of the 2010-2013 IWC Gray Whale Implementation Review with a focus on the PCFG, new evidence was presented demonstrating that at least some gray whales considered to be a part of the WNP stock migrate to the eastern North Pacific as far south as the wintering grounds in Mexico. *Id.* at 27-28.
212. To account for this new evidence, the Scientific Committee convened the five workshops from 2014-2018 comprising the “Rangewide Review,” with a focus on impacts to WNP whales. *Id.* at 31.
213. In addition to developing a set of stock structure hypotheses that considered various scenarios under which more or fewer WNP whales were present in the eastern North Pacific and could potentially be impacted by the Makah hunt, the goal of the Rangewide Review was to achieve agreement among international experts on the specifications for a range-wide multi-stock modeling framework. *Id.* at 32.
214. The resulting framework developed in the Rangewide Review represents the best available science in terms of an approach for quantitatively evaluating management plans and mitigating conservation risks for WNP and ENP gray whales, including the PCFG. *Id.*

215. In 2018, NMFS presented the current Makah hunt plan proposal to the fifth Rangewide Review workshop, and the workshop participants developed and agreed upon a final set of operating model specifications (e.g. stock structure hypotheses) and 54 trials in order to evaluate the new hunt plan. *Id.* at 35.
216. As with the 2010-2013 Implementation Review, the Rangewide Review developed trials that address key scientific uncertainties relevant to conservation risk. *Id.* at 39-40; Tr. V2 (Brandon) at 210-216. Examples of key factors include cryptic mortality (whales that die due to human causes but are not discovered), annual immigration rates into the PCFG, future UMEs, and extreme environmental stressors that would represent outcomes of climate change. *Id.*
217. Dr. Brandon participated in the Scientific Committee's evaluation of the proposed Makah hunt plan in 2018. Brandon Decl. at 6.
218. In the final analysis of the 2018 hunt plan, there were 106 trials across the alternative stock structure hypotheses; 102 of the trials were found to meet the MNPL conservation management objective for all three management units (ENP, PCFG and WNP). Brandon Decl. at 43-44. This result demonstrates that the proposed hunt satisfies the OSP objective of the MMPA for all three groups. *See* Brandon Decl. at 14; Tr. V2 (Brandon) at 208:3-6.
219. The four trials that did not meet the objectives included highly unlikely scenarios, such as 20 times the observed level of cryptic mortality for WNP whales. *Id.* at 43. These scenarios were determined to have low plausibility, and in the event they occurred, it would be factors other than the Makah hunt that would cause nonattainment of conservation objectives. *Id.*
220. Hunt plans may not meet objectives in all trials, especially when factors other than the hunt are causing the declines, so the high degree of success demonstrated by the final analysis of the 2018 hunt plan (102 of 106 trials met conservation objectives) indicates an extremely conservative hunt. Tr. V2 (Brandon) at 210:7-14
221. The report of the fifth Rangewide Review workshop in 2018 summarized the modeling work conducted by the IWC Scientific Committee in evaluating NMFS's proposed hunt management plan and included in an appendix detailed information about the limits on landed whales, the low abundance threshold for PCFG whales, and the 10-year strike limit on PCFG whales and PCFG females. NMFS Ex. 3-39; *see also id.* at 35 (App. 1, Outline of the Makah Management Plan and its Implementation Trials).
222. Information about NMFS's proposed Makah hunt plan was also included in the "Description of the Hunt" submitted by the United States to the IWC, which was posted on the IWC's website in June 2018. Tr. V4 (Schubert) at 62:14-63:18; DePoe



- Decl., May 15, 2019, Ex. 2.<sup>10</sup> The Description of the Hunt provided details about the alternating season structure, strike limits and other restrictions of the “different and more conservative proposal.” DePoe Decl., Ex. 2 at 6.
223. The full IWC Scientific Committee agreed that the 2018 Makah hunt meets all IWC conservation objectives, and the IWC agreed with that assessment. Brandon Decl. at 44; NMFS Ex. 3-43 at 17-18.
224. The IWC Scientific Committee Report from the April 24-May 6, 2018, meeting in Bled, Slovenia, the report of the fifth Rangewide Review workshop, and the Description of the Hunt contain information about a new and different Makah management plan and were publicly available by June 2018. *See, e.g.*, NMFS Ex. 3-43 at 1 (Scientific Committee report published May 25, 2018); *id.* at 18 (referring to the fifth Rangewide Review workshop report and modeling of the Makah hunt plan); Tr. V4 (Schubert) at 63:11-18.
225. This robust process of evaluation by the world’s foremost gray whale experts based on the best scientific evidence available constitutes substantial evidence that the hunt meets the MMPA OSP requirement for ENP gray whales and protects against unsustainable impacts to PCFG and WNP whales. *See* NMFS Ex. 3-43 at 18; Brandon Decl. at 44; Tr. V2 (Brandon) at 208:3-10.
226. The proposed hunt is among the most conservative hunt plans the IWC Scientific Committee has ever evaluated, given the very low strike limits and short duration of the hunt. Tr. V2 (Brandon) at 214:2-14; *see also* Brandon Decl. at 44.

## **G. FACTS REGARDING HISTORY OF THE PROCEEDINGS AND NMFS’S PROPOSED REGULATIONS.**

### **1. The Tribe’s Waiver Request and NMFS’s Review Process (2005-2019).**

227. Following the Ninth Circuit’s ruling in *Anderson v. Evans*, 371 F.3d 475, that the Tribe must obtain a waiver of the MMPA’s take moratorium before it may exercise its treaty whaling right, Makah submitted a waiver request to NMFS on February 14, 2005. 70 Fed. Reg. 10359 (Mar. 3, 2005); ALJ Ex. 006 at App. A.
228. Citing its express right to hunt whales throughout its usual and accustomed grounds and stations under the 1855 Treaty of Neah Bay, the Tribe requested a permanent waiver to allow a total take of up to 20 gray whales in any five-year period, with a maximum of five whales in any calendar year. ALJ Ex. 006 at App. A (Feb. 11, 2005, cover letter to William T. Hogarth).
229. The Tribe’s request included time and areas restrictions, limits on the number of strikes and struck and lost whales, measures to protect public safety, and monitoring

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<sup>10</sup> Exhibit also available at: <https://iwc.int/makah-tribe>

- of the hunt using photographic identification of landed whales to reduce the risk of local depletion. ALJ Ex. 006 at App. A (Application for Waiver at 1-3). The Tribe's request also sought authorization of the sale of traditional handicrafts made from non-edible whale products. *Id.* at 3.
230. In August 2005, NMFS formally initiated the scoping process for preparation of an EIS regarding the Tribe's waiver request. The notice indicated the Tribe's effort to resume subsistence whale hunts was based on its treaty right and observed that the treaty "is the primary instrument defining the legal relationship between the United States Government and the Makah." 70 Fed. Reg. 49911, 49912 (Aug. 25, 2005).
231. On May 9, 2008, NMFS announced the availability of a Draft EIS "in response to the Makah Tribe's request that NMFS waive the take moratorium of the [MMPA] to allow for treaty right hunting of eastern North Pacific (ENP) gray whales," requested public comments, and announced three public meetings. 73 Fed. Reg. 26375 (May 9, 2008).
232. The public comment period for the 2008 Draft EIS was later extended from July 8 to August 15, 2008. 73 Fed. Reg. 33813, 33814 (June 13, 2008). NMFS received over 300 public comments, including from AWI and PCPW. Schubert Decl. ¶ 6; Owens Decl. ¶ 3.
233. On May 21, 2012, NMFS announced that it was terminating the existing Draft EIS process due to the availability of significant new scientific information since the 2008 Draft EIS. 77 Fed. Reg. 29967 (May 21, 2012). NMFS also announced it would begin preparation of a new EIS that would be informed by the new information and noted again that the EIS was "related to the [Tribe's] request that [NMFS] authorize treaty right hunting of eastern North Pacific gray whales." *Id.*
234. NMFS indicated that in preparing the new Draft EIS it would include consideration of the comments on the 2008 Draft EIS. *Id.* at 29969; Ex. NMFS 1-6 (draft staff responses to 2008 comments).
235. The availability of the second Draft EIS was announced on March 13, 2015, with a public comment period, which was later extended from 90 to 140 days, and two public meetings. 80 Fed. Reg. 13373 (March 13, 2015); 80 Fed. Reg. 14912 (March 20, 2015); 80 Fed. Reg. 30676 (May 29, 2015).
236. NMFS received nearly two thousand comments over the extended comment period, including from AWI, PCPW and SS. ALJ Ex. 008. NMFS prepared initial draft responses to all comments received, including a separate document focused on the most frequent comments. ALJ Exs. 008, 009.

## **2. NMFS's Consultation with the Marine Mammal Commission.**

237. As required by the MMPA, NMFS consulted with the Marine Mammal Commission (MMC or Commission) in developing the waiver and regulations. NMFS Ex. 1-13 (March 26, 2019 NMFS responses to MMC comments); NMFS Ex. 1-10 at 1 (May 12, 2017 NMFS consultation request); NMFS Ex. 1-14 at 1 (NMFS December 19, 2017 consultation request).
238. The NMFS-MMC consultation included both informal exchanges throughout the development of the proposed waiver and regulations and two formal requests for consultation in 2017, each of which included drafts of the proposed regulations and the Federal Register notice explaining how the proposal was consistent with the MMPA’s criteria. NMFS Ex. 1-10 (May 12, 2017 NMFS consultation request); NMFS Ex. 1-8 (July 11, 2017 MMC comment letter); NMFS Ex. 1-14 (December 19, 2017 NMFS consultation request); NMFS Ex. 1-15 (March 13, 2018 MMC comment letter); NMFS Ex. 1-13 (March 26, 2019 NMFS responses to MMC comments).
239. In both of the MMC’s comment letters, the MMC recommended that the waiver “avoid, to the maximum extent practicable, the accidental taking of gray whales from the endangered [WNP] stock, and secondarily, [] avoid taking that could disadvantage the [PCFG] regardless of whether it is considered a stock.” NMFS Ex. 1-8 at 1; NMFS Ex. 1-15 at 1. The MMC raised similar concerns in its comments on the 2015 Draft EIS. NMFS Ex. 1-11 at 2 (identifying the “[r]isk of killing or injuring a WNP gray whale” and the “[r]isk of having negative impacts on PCFG gray whales” as “primary concerns”).
240. In its first comment letter, the MMC identified the “design of an odd/even year hunting pattern [as the] key to both controlling the harvest of PCFG whales and minimizing any take of WNP whales,” noted that there is “some trade-off between the two goals,” and concluded that “the proposed rule strikes an appropriate balance between the goals of protecting WNP and PCFG whales.” NMFS Ex. 1-8 at 1-2.
241. The MMC’s second comment letter addressed the primary substantive change between the first and second drafts of the proposed regulations, namely the shift from managing incidental lethal take of PCFG whales using a PBR-based formula to a low-abundance threshold and a total strike limit. NMFS Ex. 1-15 at 1. The MMC expressed its agreement with NMFS’s rationale for this change:
- The Commission agrees that, given the availability of reliable information on the abundance and trends of PCFG whales and rates of recruitment of whales to this putative stock, there is no reason to manage removals under a PBR framework. Further, the Commission believes that setting the allowable strike limit at 16 PCFG whales over a ten-year period should provide reasonable certainty that the proposed level of hunting PCFG whales will not have adverse impacts on this “stock.”
- Id.* at 2.

242. The “overall impression” expressed by the MMC in its first consultation letter was that “the draft regulations are based on the best available science concerning gray whales and are appropriately precautionary.” NMFS Ex. 1-8 at 1.
243. The MMC noted that the proposed regulations “to a large extent, address the comments raised in [the MMC’s comments on the 2015 DEIS] as well as staff-to-staff discussions as the rule was being drafted.” *Id.*
244. The second consultation concluded that the MMC “believes that the draft documents lay out a *prima facie* case that the requirements for granting a waiver under the MMPA have been met” and “recommend[ed] that NMFS proceed with issuing a proposed rule and scheduling an administrative hearing in accordance with the requirements of [the MMPA and APA].” *Id.*

### 3. NMFS’s Proposed Waiver and Regulations.

245. On April 5, 2019, NMFS published a proposal to waive the MMPA’s take moratorium and issue regulations that would govern the Tribe’s hunt and use of edible and non-edible products obtained from landed whales. 84 Fed. Reg. 13604 (Apr. 5, 2019); ALJ Ex. 002.
246. The Federal Register notice included a detailed explanation of the proposed regulations and the reasons that the regulations (and the proposed waiver) are consistent with the requirements of the MMPA. 84 Fed. Reg. at 13607-15.
247. The proposed regulations establish a comprehensive scheme for managing the Tribe’s hunt, including definitions for over 30 terms (§ 216.112), authorization of specific forms of taking ENP gray whales during the hunt and hunt training (§ 216.113), procedures for accounting and identification of gray whales (§ 216.114), acts prohibited notwithstanding the take authorization (§ 216.115), requirements governing the Tribe’s application for MMPA permits under 16 U.S.C. § 1374 (§ 216.116), requirements for monitoring, reporting and recordkeeping (§ 216.117), and expiration of the regulations 10 years after the effective date of the first hunt permit (§ 216.118). 84 Fed. Reg. at 13618-24; *see also* NMFS Ex. 1-7 at 45-49 (Appendix 1: Key Elements of Proposed Hunt Regulations).
248. NMFS adopted two primary management goals to guide development of the proposed waiver and regulations: (1) limiting the likelihood that tribal hunters would strike or otherwise harm a WNP whale, and (2) ensuring that hunting does not cause PCFG abundance to decline below recent stable levels. Yates Decl. ¶ 26; Tr. V1 (Yates) at 27:19-24; 23:5-15.
249. The proposed regulations would establish – consistent with the recommendation of the MMC – an alternating season hunt to reduce and balance the risk of impacts on WNP and PCFG whales. Yates Decl. ¶ 27.

250. In even years, the hunting season is limited to December 1 (of the preceding odd year) through May 31, and in odd years, hunting is limited to July through October, setting aside June and November to provide a buffer for migrating WNP whales. 84 Fed. Reg. at 13618-19, §§ 216.112 (definition of odd-year and even-year hunts), 216.113(a)(2).
251. In even years, three whales may be struck and three may be landed, and in odd years two strikes (but only one landed whale) are allowed. 84 Fed. Reg. at 13620, § 216.113(a)(4)(iii, v).
252. The proposed waiver would expire after 10 years. 84 Fed. Reg. at 136124, § 216.118(a).
253. The strike limits combined with the 10-year term of the waiver ensure that a maximum of 25 strikes and 20 landed whales would be authorized, half of the number of landed whales that the Tribe requested in its 2005 waiver application. 84 Fed. Reg. at 13620, 13624, § 216.113(a)(4)(iii, v), 216.118(a); ALJ Ex. 006 App. A at 1-2.
254. To further protect WNP whales, the proposed regulations prohibit more than one strike in a 24-hour period during even-year hunts (to avoid the potential of striking two WNP whales traveling together) and limit training harpoon throws to the July-October hunting season in odd years. 84 Fed. Reg. at 13619-20, § 216.113(a)(4)(ii-iii); Yates Decl. ¶¶ 32, 41.
255. If a whale is landed in an even-year hunt, the Tribe may not hunt again until it has received written notification from NMFS regarding its determination whether the whale is identified as a WNP, PCFG, or neither. 84 Fed. Reg. at 13621-22, § 216.115(a)(11), 216.114(b)(1).
256. If NMFS determines that a WNP whale was struck during a hunt, all hunting must cease “unless and until [NMFS] determines that measures have been taken to ensure no additional WNP gray whales are struck during the duration of the permit.” 84 Fed. Reg. at 13620, § 216.113(a)(4)(vii). In that situation, no additional hunt permits may be issued without such a determination. *Id.*
257. NMFS conducted a probability analysis relying on the best scientific evidence available and making conservative assumptions of the risk that the proposed hunt would result in a strike on a WNP whale. This analysis was updated in 2019 based on recent mixing proportions of gray whales in the hunt area and other information. Yates Decl. ¶ 63-66; Moore Decl. ¶¶ 11-18 (describing NMFS’s WNP probability analysis); Moore 2nd Decl. ¶ 8 (summarizing updated analysis); NMFS Ex. 4-15 (July 3, 2019 Moore to Yates memo regarding updated WNP analysis).
258. Collectively, the measures in the proposed regulations designed to limit the risk of death or serious injury of a WNP gray whale reduce the probability that a single even-year strike encounters a WNP whale to 0.5% and the probability of a WNP strike over

- the entire 10-year waiver period (15 total even-year strikes) to 7.4%. Moore 2nd Decl. ¶ 8. This is equivalent to only one WNP whale being struck every *135 years*, on average, if the regulations continued in perpetuity, the maximum number of strikes were made each year, and the WNP and ENP population sizes remained constant. *Id.*
259. Even though NMFS has determined that, based on the best scientific evidence available, the PCFG is not a separate ‘population stock’ from the ENP gray whale stock, Bettridge Decl. ¶ 20, NMFS included numerous provisions in the proposed regulations to limit impacts to these whales. Together, these provisions are intended to ensure that ENP gray whales remain at recent stable abundance levels, maintain their distribution, and continue to serve as a functioning element of the ecosystem within the PCFG range. Yates Decl. ¶ 26.
  260. Of the 25 strikes allowed over 10 years, a majority (15) are restricted to the migratory season when most of the whales in the hunt area will be members of the larger ENP stock, *i.e.*, not PCFG whales, on their northern or southern migration. Yates Decl. ¶ 29.
  261. No hunting, approaches for hunting or training, or training harpoon throws are allowed in in the Strait of Juan de Fuca, where a higher proportion of PCFG whales are present during the migration season. 84 Fed. Reg. at 13620, § 216.113(a)(6)(iii); Yates Decl. ¶ 30.
  262. Although up to two strikes are allowed during odd-year hunts, landing the one allowed whale with the first strike would prevent the use of the second strike, potentially eliminating up to five strikes over 10 years. *See* 84 Fed. Reg. at 13620, § 216.113(a)(4)(iii); Yates Decl. ¶ 33.
  263. A separate 16-strike limit is established for PCFG whales over the 10-year waiver period, of which no more than 8 may be female PCFG whales. 84 Fed. Reg. at 13620, § 216.113(a)(4)(iii).
  264. Whales struck in odd-year hunts are presumed to be PCFG whales unless NMFS determines through photographic or genetic identification that a struck whale is a WNP gray whale. 84 Fed. Reg. at 13621, § 216.114(b)(2); Yates Decl. ¶ 36.
  265. For strikes during even-year hunts, a photographically or genetically matched PCFG whale would count against the PCFG strike limit, while a whale that cannot be identified will count against the limit in proportion to the availability of PCFG whales in the hunt area, which is currently 28%. 84 Fed. Reg. at 13621, § 216.114(b)(1); Yates Decl. ¶ 35.
  266. Before any hunt can occur, NMFS must determine that both the most recent PCFG abundance estimate based on photo-identification surveys and a projection of PCFG abundance based on a model developed by Jeffrey Moore for the current hunt year are not less than 192 whales (or an Nmin of 171 whales). 84 Fed. Reg. at 13620, §§

- 216.113(a)(4)(vi)(A, B), 216.113(a)(7)(v). NMFS selected the “low abundance trigger” levels based on the objective of maintaining the PCFG at or above its lowest level during a period of stable and/or increasing abundance beginning in 2002. Yates Decl. ¶ 37; Weller Decl. ¶¶ 26, 55-56; Moore Decl. ¶ 21; NMFS Ex. 1-7 at 50-52 (App. 2).
267. Utilizing the low abundance trigger and PCFG strike limits to minimize impacts to PCFG whales from the hunt was a change from the PBR-based approach described in the 2015 Draft EIS, the initial proposed regulations shared with the MMC, and the Tribe’s waiver request. *See* NMFS Ex. 1-10; ALJ Ex. 002 at App. A.
268. NMFS thoroughly explained the basis for the change to use of the low abundance trigger, and the MMC agreed with the rationale. 84 Fed. Reg. at 13609; Yates Decl. ¶¶ 38-39; NMFS Ex. 1-15 at 1-2.
269. The proposed regulations impose numerous restrictions on the use, possession, transport and consumption of products obtained from gray whales landed in a hunt. 84 Fed. Reg. at 13620, § 216.113(b).
270. Under the proposed regulations, Makah members may broadly possess, consume, transport, and barter and share edible whale products with other Makahs regardless of location. 84 Fed. Reg. at 13620, § 216.113(b)(1)(i).
271. Under the proposed regulations, Makahs may share edible products with any person on the Makah Reservation, and non-Makahs may possess, transport and consume them while on the reservation. 84 Fed. Reg. at 13620, § 216.113(b)(1)(i-ii).
272. Under the proposed regulations, Makahs are far more limited in how they can share edible products with non-Makahs outside of the reservation. *See* 84 Fed. Reg. at 13620-21, § 216.113(b)(1)(i-ii).
273. Under the proposed regulations, non-Makahs may only possess and consume edible products outside of the reservation at a tribal or intertribal gathering sanctioned by the Makah Tribal Council when they are shared by a Makah in an amount not more than two pounds per non-Makah and consumed at the gathering. 84 Fed. Reg. at 13620-21, § 216.113(b)(1)(i-ii).
274. The Makah Tribe objects to original version of the proposed regulations regarding non-Makah possession and consumption of edible whale products outside of the reservation, in the context of a Makah household. *See* Tribe’s Post-Hearing Br. Part V.G; Arnold Decl. ¶ 20; Tr. V3 (Arnold) at 9:23-10:22 (“[M]y grandmother would be mad at me for not bringing whale to [non-Makah family members]”).
275. The proposed regulations also address utilization of non-edible whale products and provide for different categories of such products and differential treatment depending on whether the person utilizing such products is a Makah or non-Makah and is

- located on or outside of the reservation. 84 Fed. Reg. at 13621, § 216.113(b)(2). These provisions address the making, certification, commercial sale and possession by non-Makahs of traditional handicrafts, as well as rules regarding non-certificated handicrafts and products that have not been fashioned into handicrafts. *Id.*
276. The Tribe must also maintain an official record of all certified handicrafts. 84 Fed. Reg. at 13623, § 216.117(a)(5).
277. Because the Tribe will need to obtain a permit under 16 U.S.C. § 1374 before it can hunt (assuming the waiver and regulations are approved), the proposed regulations set out a detailed process for the permit application and requirements of the hunt permit. 84 Fed. Reg. at 13622, 13619-20, §§ 216.116, 216.113(a).
278. The proposed regulations restrict the initial hunt permit for the Tribe to three years (compared to the MMPA's maximum permit term of five years). 84 Fed. Reg. at 13620, § 216.113(a)(1). As a result, the Tribe will be required to obtain at least three separate permits to hunt for the full 10-year term of the waiver.
279. NMFS's rationale for this provision, as well as the 10-year sunset on the waiver and regulations as a whole, is to provide opportunities for adaptive management and to ensure that ceremonial and subsistence hunting by the Tribe does not result in unanticipated adverse effects. Yates Decl. ¶ 28; *see also* Yates 3rd Decl. ¶ 35 (rebutting Mr. Schubert's critique regarding potential uncertainties in the details and nuance of hunt management).
280. Adaptive management of the Tribe's hunt will be informed by the extensive monitoring, reporting and recordkeeping requirements of the proposed regulations. *See* 84 Fed. Reg. at 13622-24, § 216.117.
281. A certified tribal hunt observer must accompany each hunt and record specified information, and the whaling captain must accommodate a NMFS observer. 84 Fed. Reg. at 13622-23, § 216.117(a)(1), (4).
282. The Tribe must also submit the following reports to NMFS at times specified in the proposed regulations: 1) a list of Makah members certified to participate in a hunt; 2) an incident report after a whale is struck; 3) an annual hunt report; 4) an annual approach report; and 5) an annual handicraft report. § 216.117(6)(i-vi).
283. All recordkeeping and reporting requirements will be evaluated for compliance when the Tribe applies for hunt permits after the three-year term of the initial permit. 84 Fed. Reg. at 13622, § 216.116(b)(1).

#### **4. Proceedings Regarding the On-the-Record Hearing on NMFS's Proposed Waiver and Regulations.**



284. On the same day as the notice of the proposed waiver and regulations, NMFS published a notice of hearing. 84 Fed. Reg. 13639 (Apr. 5, 2019). The notice established a May 6 deadline for interested persons to notify the agency if they desired to participate as a party; a May 20 deadline for initial written direct testimony; a June 17 pre-hearing conference with the presiding officer; and a hearing date of August 12, 2019, in Seattle, Washington. *Id.*
285. The hearing notice also included NMFS’s identification of over 60 “[i]ssues of [f]act [t]hat [m]ay [b]e [i]nvolved in the [h]earing.” *Id.* at 13641-43. NMFS’s initial direct written testimony and supporting exhibits were made available to the public on the ALJ’s Electronic Reading Room<sup>11</sup> and on NMFS’s website for the rulemaking process.<sup>12</sup>
286. Several entities and one individual requested to participate in the hearing: 1) Animal Welfare Institute (AWI); 2) Makah Indian Tribe (Makah or Tribe); 3) Marine Mammal Commission; 4) Ms. Inanna McCarty; 5) Peninsula Citizens for the Protection of Whales (PCPW); 6) Sea Shepherd Legal; and 7) Sea Shepherd Conservation Society (collectively, Sea Shepherd” or SS). *See* NMFS’s Proposed Hearing Agenda, June 6, 2019, Ex. 1 at 3-4.
287. With the exception of Ms. McCarty, all of the parties actively participated throughout the hearing process. Except for PCPW, all of the parties were represented by counsel, and all but the MMC were represented by at least three attorneys. *See, e.g.,* Makah Tribe’s Proposed Hearing Agenda, June 7, 2019 at 2-3 (listing parties and counsel).
288. On May 10, 2019, AWI and Sea Shepherd filed expedited motions to extend the hearing schedule by at least 90 days, principally to afford them more time to identify potential witnesses and develop initial direct written testimony. *See* AWI’s Expedited Mot. to Extend Wavier Proceedings Schedule, May 10, 2019; Sea Shepherd’s Expedited Mot. for Extension of Time to Submit Initial Direct Testimony and for Continuance of Hearing, May 10, 2019.
289. In its motion AWI also argued that the IWC’s Scientific Committee meeting in Nairobi, Kenya, conflicted with the deadline for initial testimony, making it impossible for Dr. Naomi Rose, AWI’s in-house cetacean expert, who “intend[ed] to participate in [the waiver hearing] as a witness,” to meaningfully participate. AWI’s Expedited Motion to Extend Waiver Proceedings Schedule, May 10, 2019, at 4; *see also* Decl. of Naomi Rose on Behalf of AWI Expedited Motion to Extend Waiver Proceedings Schedule, May 10, 2019.

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<sup>11</sup> <https://www.uscg.mil/Resources/Administrative-Law-Judges/Decisions/ALJ-Decisions-2016/NOAA-Formal-Rulemaking-Makah-Tribe/>.

<sup>12</sup> <https://www.fisheries.noaa.gov/action/formal-rulemaking-proposed-mmpa-waiver-and-hunt-regulations-governing-gray-whale-hunts-makah>. NMFS’s initial declarations and supporting documents appear to no longer be available on its website, but a link to the ALJ’s Electronic Reading Room is available.

290. On May 20, the presiding officer denied the motions to extend the hearing schedule. *See Order Denying Sea Shepherd’s and Animal Welfare Institute’s Expedited Mots. to Extend Waiver Proceedings Schedule*, May 20, 2019.
291. On June 10, the presiding officer issued a draft of his determination of the issues for the hearing, *Notice and Agenda: Prehearing Conference*, June 10, 2019, and on June 17 held a pre-hearing conference attended by all of the active parties in the proceeding.
292. All parties except PCPW were represented by counsel; Ms. McCarty did not participate. *Tr. of Prehearing Conference*, June 17, 2019, at 2:2-3:20.
293. In addition to addressing the issues for the hearing, the parties and presiding officer discussed a potential change in the hearing date to avoid a conflict with the rescheduled Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Conference of the Parties meeting in Switzerland. *Id.* at 83:21-101:22.
294. On June 26, the presiding officer published notice of the final hearing agenda (which was later modified) and a July 9 deadline for rebuttal and other written testimony. 84 *Fed. Reg.* 30088 (June 26, 2019).]
295. On June 24, the parties submitted additional information on their availability for a hearing date in mid-September, as requested by the presiding officer at the pre-hearing conference. *See Tr. of Prehearing Conference*, June 17, 2019, at 101:23-104:21.
296. On June 24, the NGO Parties also submitted formal, coordinated requests to move hearing date to the week of September 16. AWI’s *Request to Move the Hearing Date in the Waiver Proceeding*, June 24, 2019; Sea Shepherd’s *Request to Move Hearing Date*, June 24, 2019, at 4-5; *see also* PCPW’s *Request to Change the Date for Hearing*, June 24, 2019.
297. AWI and Sea Shepherd objected to the original August 12 start of the hearing because the CITES meeting had been rescheduled following the Easter Day terrorist attacks in Sri Lanka to August 17-28 in Geneva, Switzerland; representatives from both organizations who intended to participate in the waiver hearing planned to attend the CITES meeting. AWI’s *Request to Move the Hearing Date in the Waiver Proceeding*, June 24, 2019, at 3 (Schubert conflict); Sea Shepherd’s *Request to Move Hearing Date*, June 24, 2019, at 4-5 (Pruett and Sommermeyer conflict); *see also* PCPW’s *Request to Change the Date for Hearing*, June 24, 2019 (expressing concern regarding hardship of retaining the August 12 hearing date, including work and travel-related issues).
298. In its request, AWI argued that it would be “unable to fully participate in the waiver proceeding . . . if the hearing date is not postponed to mid-September, including by

- being unable to secure the participation of important witnesses.” AWI’s Request to Move the Hearing Date in the Waiver Proceeding, June 24, 2019, at 5.
299. In its request, Sea Shepherd argued that two potential rebuttal witnesses would have difficulty testifying in August, but would be available in mid-September. *See* Sea Shepherd’s Request to Move Hearing Date, June 24, 2019, at 6; Decl. of Catherine Pruett June 24, 2019, ¶ 23.
300. On July 8, the presiding officer granted the NGO Parties’ requests to move the hearing, citing the conflict with the CITES meeting (including for AWI’s “primary witness” Mr. Schubert), as well as the effect on Sea Shepherd’s representation by counsel at the hearing and conflicts with its potential witnesses’ schedules. Order Granting Request to Change Hearing Date, July 8, 2019, at 3.
301. In the order granting the requests to move the hearing, the presiding officer proposed a range of hearing dates from late September through mid-October. *Id.* at 6.
302. NMFS and the NGO Parties then stipulated (without opposition from the Tribe) to continuing the remaining deadlines for submission of written testimony by four weeks, which request the presiding officer granted on July 9. Partial Stipulation re Extension of Prehearing Dates, July 9, 2019; Order Granting Extension of Prehearing Dates [sic], July 9, 2019.
303. A second prehearing conference was held on July 24, at which time, due to additional scheduling conflicts and related considerations, the presiding officer scheduled the hearing to begin on November 14, 2019 at 1:00pm. Tr. of Prehearing Conference, July 24, 2019, at 2:22-3:15, 6:19-7:3, 16:8-12; *see also* 84 Fed. Reg. 37837 (Aug. 2, 2019).
304. On August 9, AWI, Sea Shepherd, NMFS and the Tribe filed motions to exclude or limit testimony and evidence and/or regarding the issues identified for the hearing. AWI’s Mot. in Limine to Exclude Testimony and Evidence, Aug. 9, 2019; Makah Tribe’s Mot. Re Issues To Be Addressed at the Hearing, Aug. 9, 2019; NMFS’s Mot. to Limit Issues and Testimony, Aug. 9, 2019; [Sea Shepherd] Mot. to Exclude Evidence Regarding Treaty Right and Cultural Significance of Whaling, Aug. 9, 2019. On August 16, AWI filed an additional motion regarding rebuttal testimony. AWI’s Mot. in Limine to Exclude Rebuttal Testimony and Evidence, Aug. 16, 2019. On October 9, the presiding officer issued an order granting in part and denying in part motions in limine and requests to modify the final agenda. Order Granting in Part and Denying in Part Mots. in Limine and Requests To Modify the Final Agenda, Oct. 9, 2019 (denying most motions to exclude testimony subject to reconsideration at the hearing).
305. On October 25, the presiding officer issued an order approving the parties’ agreed hearing management plan with some modifications. Order Approving Hearing Management Plan, Oct. 25, 2019. On October 28, NMFS moved to request revisions

- to the proposed regulations in order to clarify certain provisions and make substantive changes to the provisions regarding use of edible whale products by non-Makahs off-reservation. NMFS's Mot. Requesting Revisions To Proposed Regulations, Oct. 28, 2019, Att. A at 10. On November 5, the presiding officer ordered the motion to be held in abeyance and indicated he would accept responsive arguments up to and including in the post-hearing briefs. Order Holding NMFS's Mot. Requesting Revisions to Proposed Regulations in Abeyance and Setting Deadline for Response, Nov. 5, 2019. A final hearing agenda, with the modifications granted in the October 9 order, was published on November 4. 84 Fed. Reg. 59360 (Nov. 4, 2019).
306. Between November 14 and November 21, 2019, an on-the-record hearing was conducted pursuant to 16 U.S.C. § 1373(d), 5 U.S.C. §§ 556-57, and 50 C.F.R. § 228, with direct testimony from 17 witnesses and cross examination of all witnesses except the four Makah tribal members, the Tribe's expert historian, and PCPW's Margaret Owens. *See* Tr. V1-V6; *see also* Notice re Witnesses and Timekeeper for Hearing, Nov. 4, 2019.
  307. Of the parties, only Ms. McCarty did not attend the hearing. Tr. V1 at 2 (list of parties and counsel or representatives); *id* at 10:13-16.
  308. Margaret Owens actively participated throughout the hearing on behalf of PCPW. *See* Tr. V1-V6. AWI's cross examination was conducted by AWI's only witness, D.J. Schubert, as well as AWI's two attorneys. *Id.* Brett Sommermeyer, who had submitted initial direct testimony on behalf of Sea Shepherd, did not testify at the hearing following Sea Shepherd's withdrawal of his testimony on November 7. *See* Sea Shepherd's Initial Direct Testimony and Exhibits – Decl. of Brett Sommermeyer, May 21, 2019; Notice Withdrawing Initial Direct Testimony of Brett Sommermeyer, Nov. 7, 2019.
  309. On January 29, NMFS published a notice of availability of the final transcript of the hearing and a request for submission of public comments by March 16, 2020. 85 Fed. Reg. 5196 (Jan. 29, 2020).

## **II. CONCLUSIONS OF LAW**

### **A. THE TRIBE'S RIGHT OF WHALING UNDER THE TREATY OF NEAH BAY**

1. As ratified by the Senate and proclaimed by the President on March 8, 1859 and April 18, 1859, respectively, the treaty is binding federal law and, under Article 6 of the United States Constitution, is entitled to the same legal status as any federal statute. 12 Stat. 939 (Jan. 31, 1855); U.S. Constitution, art. VI.
2. Where two legally valid federal laws, such as the Treaty of Neah Bay and the MMPA, are implicated and an apparent conflict exists between them, the courts must strive to harmonize the two laws, giving effect to both laws if possible. *Ass'n of Am.*

*R.Rs. v. S. Coast Air Quality Mgmt. Dist.*, 622 F.3d 1094, 1097 (9th Cir. 2010); *Swinomish Indian Tribal Cmty. v. BNSF Ry. Co.*, 2020 U.S. App. LEXIS 6787, \*32-33, \_\_\_ F.3d \_\_\_ (No. 18-35704 9th Cir. 2020).

3. A central principle of interpreting and applying Indian treaty rights is that the treaty must be construed “not according to the technical meaning of its words to learned lawyers, but in the sense in which they would naturally be understood by the Indians.” *Washington v. Washington State Commercial Passenger Fishing Vessel Ass’n*, 443 U.S. 658, 676 (1979) (quoting *Jones v. Meehan*, 175 U.S. 1, 11 (1899)); see also *Minnesota v. Mille Lacs Band of Chippewa Indians*, 526 U.S. 172, 196 (1999); *Herrera v. Wyoming*, 139 S. Ct. 1686, 1699 (2019); *Wash. State Dep’t of Licensing v. Cougar Den, Inc.*, 139 S. Ct. 1000, 1011 (2019) (“language of the treaty should be understood as bearing the meaning that the [tribe] understood it to have in 1855”).
4. The Tribe’s lay and expert testimony about its treaty right is relevant – and central – to this proceeding and NMFS’s ultimate decision on the waiver and regulations. *Anderson*, 371 F.3d, at 501 & n.26; see also Tribe’s Post-Hearing Br. Part V.A. Interpreted in accordance with the applicable canons of construction and in light of that testimony, the treaty secures to the Tribe the right to a meaningful harvest of gray whales sufficient to fulfill the purposes of the treaty.
5. Under *Anderson v. Evans*, NMFS must utilize the MMPA’s waiver and permit processes to determine whether whales are available for harvest by the Tribe. 371 F.3d at 500-01. Those processes are designed to ensure the conservation of whales and to protect the interests of non-tribal members in non-consumptive uses of whales, including whale watching and scientific research. *Id.* If it is determined that whales are available for harvest by the Tribe under the MMPA’s waiver and permit processes, alleged “co-tenancy” rights of non-Indians in the resource cannot be invoked to deprive the Tribe of a meaningful harvest opportunity. See Tribe’s Post-Hearing Br. Part V.A.
6. NMFS’s proposed regulations impose substantial limitations on the exercise of the Tribe’s treaty right. However, the Tribe has objected to only one of those limitations – a restriction on sharing edible whale products with non-Makahs off-reservation. See Tribe’s Post-Hearing Br. Part V.G. NMFS’s proposed revision to that regulation is reasonable and necessary to comply with the Tribe’s treaty right. See Mot. Requesting Rev’ns to Prop. Regs, Oct. 28, 2019.

## **B. NMFS HAS SATISFIED THE REQUIREMENTS FOR WAIVING THE MMPA’S TAKE MORATORIUM**

7. The Secretary of Commerce (acting through NMFS) may waive the MMPA’s moratorium on the taking of marine mammals, *having due regard to the distribution, abundance, breeding habits, and times and lines of migratory movements of such marine mammals*. 16 U.S.C. § 1371(a)(3)(A) (emphasis added).

8. A waiver must be based on the “best scientific evidence available” and made “in consultation with the Marine Mammal Commission.” 16 U.S.C. § 1371(a)(3)(A).
9. In waiving the moratorium, the Secretary “must be assured that the taking of such marine mammal is in accord with the sound principles of resource protection and conservation as provided in the purposes and policies of [the MMPA].” 16 U.S.C. § 1371(a)(3)(A).
10. The MMPA’s purposes and policies are articulated in 16 U.S.C. § 1361, and include the following: 1) marine mammal “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;” 2) “the primary objective of [marine mammal] management should be to maintain the health and stability of the marine ecosystem[;]” and 3) “to obtain an optimum sustainable population keeping in mind the carrying capacity of the environment.” 16 U.S.C. § 1361(2), (6).
11. Under the MMPA, the term “population stock” or “stock” means “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) (emphasis added).
12. Under the MMPA, the term “optimal sustainable population” means “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.” 16 U.S.C. § 1362(9) (emphasis added).
13. NMFS’s implementing regulations state that “[*o*]ptimum sustainable population is 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 maximum net productivity. Maximum net productivity is 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.” 50 C.F.R. § 216.3 (emphasis added).
14. This proceeding involves a proposal to waive the take moratorium to allow the taking of whales from the ENP stock of gray whales. There is substantial evidence in the record of this proceeding that the Pacific Coast Feeding Group is not a population stock within the meaning of the MMPA but is a feeding group within the ENP stock. *See* Tribe’s Post-Hearing Br. Part V.B.
15. There is substantial evidence in the record of this proceeding that NMFS demonstrated “due regard” for the distribution, abundance, breeding habits, and times and lines of migratory movements of the ENP stock of gray whales in proposing to waive the MMPA’s take moratorium and authorize the Makah Tribe to conduct a

ceremonial and subsistent hunt under the Treaty of Neah Bay. *See* Tribe's Post-Hearing Br. Part V.C.

16. There is substantial evidence in the record of this proceeding that, in developing the proposed waiver, NMFS consulted with the Marine Mammal Commission. *See* Tribe's Post-Hearing Br. Part V.F.
17. There is substantial evidence in the record of this proceeding that, in developing the proposed waiver, NMFS reviewed, considered, and based the proposed waiver on relevant scientific information that, collectively, constitutes the best scientific evidence available. *See* Tribe's Post-Hearing Br. Part V.E.
18. There is substantial evidence in the record of this proceeding that, in developing the proposed waiver, NMFS was assured that the proposed take of ENP gray whales will be in accord with the sound principles of resource protection and conservation as provided in the purposes and policies of the MMPA, namely, that: 1) ENP gray whales will not diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part; 2) the health and stability of the marine ecosystem will be maintained; and 3) the ENP gray whale stock will be maintained at its optimum sustainable population keeping in mind the carrying capacity of the environment. *See* Tribe's Post-Hearing Br. Part V.C.4.
19. There is substantial evidence in the record of this proceeding that, in developing the proposed waiver, NMFS considered the impacts of the proposed take of ENP gray whales on the PCFG even though it is not a population stock within the meaning of the MMPA. There is substantial evidence in the record that, with respect to the PCFG, the proposed take was in accord with sound principles of resource management and conservation as provided in the purposes and policies of the MMPA, namely, that 1) PCFG gray whales will not diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part; 2) the health and stability of the marine ecosystem will be maintained; and 3) the PCFG will be maintained at or allowed to achieve its optimum sustainable population keeping in mind the carrying capacity of the environment. *See* Tribe's Post-Hearing Br. Part V.C.4.

**C. NMFS HAS SATISFIED THE REQUIREMENTS FOR REGULATIONS GOVERNING THE TAKE OF MARINE MAMMALS.**

20. Regulations to implement a waiver of the take moratorium must be based on the best scientific evidence available, prescribed in consultation with the Marine Mammal Commission, and consistent with the purposes and policies set forth in 16 U.S.C. § 1361. 16 U.S.C. § 1373(a).
21. The regulations must “insure that such taking will not be to the disadvantage of those species and population stocks.” 16 U.S.C. § 1373(a). NMFS has interpreted the term

“disadvantage,” which is not defined in the MMPA, in relation to a stock’s OSP level. Yates Decl. ¶ 56 (citing 45 Fed. Reg. 72178, 72185 (Oct. 31, 1980)).

22. In prescribing regulations, the Secretary “shall give full consideration to all factors which may affect the extent to which such animals may be taken.” These factors include, but are not limited to the effect of the proposed regulations on:

- (1) existing and future levels of marine mammal species and population stocks;
- (2) existing international treaty and agreement obligations of the United States;
- (3) the marine ecosystem and related environmental considerations;
- (4) the conservation, development, and utilization of fishery resources;<sup>13</sup> and
- (5) the economic and technological feasibility of implementation.

16 U.S.C. § 1373(b).

23. NMFS determined that the risk of the Makah hunt encountering WNP gray whales was an additional relevant factor under 16 U.S.C. § 1373(b).

24. Before or concurrent with the Federal Register notice of intent to prescribe regulations, the Secretary must also publish: a statement of the effect of the proposed regulations on the stock’s OSP; a statement of the evidence on which the regulations are based; and any studies or recommendations that relate to the proposed regulations. 16 U.S.C. § 1373(d)(2)-(4). NMFS satisfied that procedural mandate by publishing such statements, studies and recommendations in the Federal Register notice announcing the proposed waiver and regulations. 84 Fed. Reg. at 13615-17.

25. There is substantial evidence in the record of this proceeding that, in developing the proposed regulations, NMFS consulted with the Marine Mammal Commission. *See* Tribe’s Post-Hearing Br. Part V.F.

26. There is substantial evidence in the record of this proceeding that, in developing the proposed regulations, NMFS reviewed, considered, and based the proposed regulations on relevant scientific information that, collectively, constitutes the best scientific evidence available. *See* Tribe’s Post-Hearing Br. Part V.E.

27. There is substantial evidence in the record of this proceeding that, in developing the proposed waiver, NMFS was assured that the proposed take of ENP gray whales, including any take of PCFG whales, will be consistent with the purposes and policies of the MMPA in 16 U.S.C. § 1361, and that any impacts on WNP gray whales would also be consistent with the purposes and policies of the MMPA in 16 U.S.C. § 1361. *See* Tribe’s Post-Hearing Br. Parts V.D.3, V.D.5, V.C.4.

28. There is substantial evidence in the record of this proceeding that, in developing the proposed regulations, NMFS insured that: 1) the proposed take of ENP gray whales will not be to the disadvantage of the ENP stock because the stock will be maintained

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<sup>13</sup> The proposed regulations do not affect fishery resources, so this factor is not addressed below in Part II.D.



at its optimum sustainable population keeping in mind the carrying capacity of the environment; 2) the take of PCFG whales will not be to the disadvantage of the PCFG because the PCFG will be allowed to achieve or be maintained at its optimum sustainable population keeping in mind the carrying capacity of the environment; and 3) the impact of the hunt on the WNP stock will not be to the disadvantage of the WNP stock because the stock will be allowed to achieve or be maintained at its optimum sustainable population keeping in mind the carrying capacity of the environment. *See* Tribe's Post-Hearing Br. Part V.D, V.C.4.a.

29. There is substantial evidence in the record of this proceeding that NMFS gave full consideration to all factors which may affect the extent to which such animals may be taken, including the effect of the proposed regulations on the five factors enumerated in 16 U.S.C. § 1373(b) and the additional relevant factor of risk to WNP gray whales. *See* Tribe's Post-Hearing Br. Part V.D.1 – V.D.5, V.B.2 n.20.

**D. THE MMPA'S BEST SCIENTIFIC EVIDENCE AVAILABLE STANDARD AND THE "PRECAUTIONARY PRINCIPLE."**

30. The MMPA's best scientific evidence available standard requires NMFS to consider, analyze and apply all relevant scientific data available at the time NMFS undertakes the analysis, and not to disregard available data that is better than the data it considers, analyzes and applies. 16 U.S.C. §§ 1371(a)(3)(A), 1373(a); *Amer. Tunaboat Ass'n v. Baldrige*, 738 F.2d 1013, 1017 (9th Cir. 1984); *see Inland Empire Pub. Lands Council v. U.S. Forest Serv.*, 88 F.3d 754, 762 (9th Cir. 1996).
31. The MMPA's best scientific evidence available standard does not require NMFS to resolve all uncertainty or conduct new studies before making a decision on the proposed waiver and regulations. 16 U.S.C. §§ 1371(a)(3)(A), 1373(a); *see Ariz. Cattle Growers' Ass'n v. Salazar*, 606 F.3d 1160, 1164 (9th Cir. 2010); *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 618 (9th Cir. 2014).
32. The "precautionary principle," or approach, was intended to be and is intrinsic to the MMPA, therefore the principle is fulfilled by compliance with the requirements of the MMPA. Statement of Sen. Packwood, H.R. Rep. No. 92-707, at 24 (1971); 118 CONG. REC. S15680 (daily Ed. Oct. 4, 1971); 118 CONG. REC. H7687 (daily Ed. March 9, 1972) (statement of Rep. Pelly).

**E. NMFS SATISFIED THE REQUIREMENTS OF THE ADMINISTRATIVE PROCEDURE ACT AND THE AGENCY'S HEARING REGULATIONS.**

33. NMFS's approval of a waiver of the take moratorium under the MMPA requires formal rulemaking under the Administrative Procedure Act (APA). 16 U.S.C. § 1373(d); 5 U.S.C. § 553. Formal rulemaking occurs pursuant to 5 U.S.C. §§ 556-57 and, for purposes of the MMPA, must follow NMFS's regulations set forth in 50 C.F.R. Part 228.

34. NMFS is the proponent of the draft regulation and has the burden of proof. 5 U.S.C. § 556(d).
35. In formal rulemaking under the APA, “[a] party is entitled to present his case or defense by oral or documentary evidence, to submit rebuttal evidence, and to conduct such cross examination as may be required for a full and true disclosure of the facts.” 5 U.S.C. §556(d).
36. In formal rulemaking, due process is provided by adherence to the requirements of the APA and implementing regulations. The presiding officer must provide “some mechanism for interested parties to introduce adverse evidence and criticize evidence introduced by others.” *Mobil Oil Corp. v. Fed. Power Comm’n.*, 483 F.2d 1238, 1258 (1973) (emphasis added); *see also Cent. Freight Lines, Inc. v. United States*, 669 F.2d 1063, 1068 (5th Cir. 1982); *Bethlehem Mines Corp. v. Henderson*, 939 F.2d 143 (4th Cir. 1991).
37. APA due process requirements are incorporated into NMFS’s hearing regulations, which, *inter alia*, provide for any interested person or entity to participate as a party, 50 C.F.R. § 228.5, the opportunity to submit direct testimony, 50 C.F.R. § 228.17, and the opportunity to subject adverse parties’ witnesses to cross-examination, 50 C.F.R. § 228.18.
38. An additional element of due process in formal rulemaking is the prohibition of *ex parte* communications with the presiding officer or NMFS. *See* 5 U.S.C. §§ 551(14), 557(d)(1)(A); 50 C.F.R. § 228.10.
39. The APA requires a ruling on each proposed finding of fact and conclusion of law presented by the parties. 5 U.S.C. § 557(c)(3)(A)-(B); 50 C.F.R. § 228.20(a)(2), (3).
40. The presiding officer’s recommended decision must be based upon “consideration of the whole record or those parts thereof cited by a party and supported by and in accordance with the reliable, probative, and substantial evidence.” 5 U.S.C. § 556(d); *see also* 50 C.F.R. § 228.20(a).
41. The APA’s standard establishes a preponderance-of-the-evidence standard of proof. *Steadman v. SEC*, 450 U.S. 91, 100-01 (1981).
42. In this proceeding, all due process requirements of the APA and NMFS’s hearing regulations were satisfied because the parties presented their case by written, oral and documentary evidence, including through the submission of written rebuttal testimony, and conducted cross examination at the hearing.

## **F. CONCLUSION.**

43. NMFS's proposed waiver and regulations, including NMFS's proposed amendments thereto, are consistent with the MMPA, necessary to enable the Tribe to exercise its treaty whaling rights, and should be approved.

Respectfully submitted this 20th day of March, 2020.

ZIONTZ CHESTNUT

/s/ Brian C. Gruber

Brian C. Gruber

Marc D. Slonim

Wyatt F. Golding

Anna E. Brady

2101 Fourth Avenue, Suite 1230

Seattle, WA 98121-2331

[bgruber@ziontzchestnut.com](mailto:bgruber@ziontzchestnut.com)

[mstonim@ziontzchestnut.com](mailto:mstonim@ziontzchestnut.com)

[wgolding@ziontzchestnut.com](mailto:wgolding@ziontzchestnut.com)

[abrady@ziontzchestnut.com](mailto:abrady@ziontzchestnut.com)

*Attorneys for Makah Indian Tribe.*

**Appendix A  
Index of Written Testimony**

<b>Filing Date</b>	<b>Full Document Title</b>	<b>Abbreviated Citation Title</b>
4/5/2019	NMFS Initial Direct Testimony - Declaration of Chris Yates	Yates Decl.
4/5/2019	NMFS Initial Direct Testimony - Declaration of Dr. Shannon Bettridge	Bettridge Decl.
4/5/2019	NMFS Initial Direct Testimony - Declaration of Dr. David Weller	Weller Decl.
4/5/2019	NMFS Initial Direct Testimony - Declaration of Dr. Jeffrey Moore	Moore Decl.
5/20/2019	Makah Initial Direct Testimony - Declaration of Jonathan Scordino	Scordino Decl.
5/20/2019	Makah Initial Direct Testimony - Declaration of John W. Bickham	Bickham Decl.
5/20/2019	Makah Initial Direct Testimony - Declaration of John R. Brandon	Brandon Decl.
5/20/2019	Makah Initial Direct Testimony - Declaration of Joshua L. Reid	Reid Decl.
5/20/2019	Makah Initial Direct Testimony - Declaration of Greig Arnold	Arnold Decl.
5/20/2019	Makah Initial Direct Testimony - Declaration of Daniel J. Greene, Sr.	Greene Decl.
5/20/2019	Makah Initial Direct Testimony - Declaration of Maria Pascua	Pascua Decl.
5/20/2019	Makah Initial Direct Testimony - Declaration of Polly DeBari	DeBari Decl.
5/20/2019	AWI Initial Direct Testimony – D.J. Schubert	Schubert Decl.
5/20/2019	Sea Shepherd Initial Direct Testimony – Declaration of Brett Sommermeyer	Sommermeyer Decl.

<b>Filing Date</b>	<b>Full Document Title</b>	<b>Abbreviated Citation Title</b>
5/20/2019	PCPW Initial Direct Testimony – Declaration of Margaret Owens	Owens Decl.
8/6/2019	NMFS Rebuttal Testimony – Third Decl. of Chris Yates	Yates 3rd Decl.
8/6/2019	NMFS Rebuttal Testimony – Second Declaration of Dr. Shannon Bettridge	Bettridge 2nd Decl.
8/6/2019	NMFS Rebuttal Testimony – Second Decl. of Dr. David Weller	Weller 2nd Decl.
8/6/2019	NMFS Rebuttal Testimony – Second Decl. of Dr. Jeffrey Moore	Moore 2nd Decl.
8/6/2019	Makah Rebuttal Testimony – Declaration of Jonathan Scordino Re Rebuttal Testimony	Scordino Rebuttal Decl.
8/6/2019	AWI Rebuttal Testimony – Rebuttal Testimony of Donald J. (“DJ”) Schubert	Schubert Rebuttal Decl.
8/6/2019	Sea Shepherd Rebuttal Testimony – Declaration of Stella Villegas-Amtmann, Ph.D.	Villegas-Amtmann Rebuttal Decl.
8/6/2019	Sea Shepherd Rebuttal Testimony – Declaration of Carrie Newell	Newell Rebuttal Decl.
8/6/2019	PCPW Rebuttal Testimony – Rebuttal to the Declaration of J. Scordino, PCPW Submitted by Margaret Owens	Owens Rebuttal Decl. re Scordino
8/6/2019	PCPW Rebuttal Testimony – Declaration of PCPW, Rebuttal to the Declaration of Chris Yates, NMFS Submitted by Margaret Owens	Owens Rebuttal Decl. re Yates
8/6/2019	Marine Mammal Commission Rebuttal Testimony – Declaration of Dr. Michael F. Tillman	Tillman Rebuttal Decl.
8/6/2019	NMFS Initial Direct Testimony re Unusual Mortality Event (UME) – Fourth Declaration of Chris Yates	Yates 4th Decl.

<b>Filing Date</b>	<b>Full Document Title</b>	<b>Abbreviated Citation Title</b>
8/6/2019	NMFS Initial Direct Testimony re Unusual Mortality Event (UME) – Third Declaration of Dr. Shannon Bettridge	Bettridge 3rd Decl.
8/6/2019	Makah Initial Direct Testimony re UME – Declaration of John R. Brandon re Testimony on ENP Gray Whale Unusual Mortality Events	Brandon UME Decl.
8/6/2019	AWI Initial Direct Testimony re UME – Declaration of D.J. Schubert	Schubert UME Decl.
9/11/2019	NMFS Rebuttal Testimony on Unusual Mortality Event – Third Declaration of Dr. David Weller	Weller 3rd Decl.
9/11/2019	NMFS Rebuttal Testimony on Unusual Mortality Event – Fifth Declaration of Chris Yates	Yates 5th Decl.
9/11/2019	AWI Rebuttal Testimony in Response to Direct Testimony – Rebuttal Testimony of Donald J. (“DJ”) Schubert	Schubert UME Rebuttal Decl.

**Appendix B  
Index of Exhibits Cited**

Exhibit Number	Full Exhibit Title
<b>Makah Tribe Exhibits</b>	
Ex. M-0022	Blohkin, S. A., M. K. Maminov, and G. M. Kosygin. 1985. On the Korean-Okhotsk population of gray whales. <i>Rep. Int. Whal. Comm.</i> 35:375–376.
Ex. M-0047	Calambokidis, J., J. D. Darling, V. Deecke, P. Gearin, M. Gosho, W. Megill, C. M. Tombach, D. Goley, C. Toropova, and B. Gisborne. 2002a. Abundance, range and movements of a feeding aggregation of gray whales ( <i>Eschrichtius robustus</i> ) from California to southeastern Alaska in 1998. <i>Journal of Cetacean Research and Management</i> 4(3):267–276.
Ex. M-0053	Calambokidis, J., J. Laake, and A. Perez. 2017. Updated analysis of abundance and population structure of seasonal gray whales in the Pacific Northwest, 1996-2015. Paper SC/A17/GW/05 Presented to Scientific Committee of International Whaling Commission.
Ex. M-0056	Calambokidis, J., and A. Perez. 2017a. Sightings and followup of mothers and calves in the PCFG and implications for internal recruitment. Paper SC/A17/GW/04 Presented to International Whaling Commission Scientific Committee
Ex. M-0057	Calambokidis, J., and A. Perez. 2017b. Association of PCFG gray whales on migration. Paper SC/A17/GW/02 Presented to the Scientific Committee of the International Whaling Commission
Ex. M-0058	Calambokidis, J., J. Quan, L. Schlender, M. Gosho, and P. Gearin. 1999. Gray whale photographic identification in 1998. Final Report to the National Marine Mammal Laboratory.
Ex. M-0150	International Whaling Commission. 2014b. Report of the Workshop on the Rangewide Review of the Population Structure and Status of North Pacific Gray Whales. Paper SC/65b/Rep08 presented to the Scientific Committee of the International Whaling Commission:1–49.
Ex. M-0171	Lagerquist, B. A., D. M. Palacios, M. H. Winsor, L. M. Irvine, T. M. Follett, and B. R. Mate. 2019. Feeding home ranges of Pacific coast feeding group gray whales. <i>The Journal of Wildlife Management</i> .

Exhibit Number	Full Exhibit Title
Ex. M-0176	Lang, A. R., and K. K. Martien. 2012. Update on the use of a simulation-based approach to evaluate plausible levels of recruitment into the Pacific Coast Feeding Group of gray whales. Paper SC/64/AWMP4 presented to the International Whaling Commission Scientific Committee.
Ex. M-0186	Makah Tribal Council. 2015. Makah training programme - draft. Paper NAMMCO/EG-TTD/Doc 16 presented to the North Atlantic Marine Mammal Commission.
Ex. M-0218	National Marine Fisheries Service. 2016. Guidelines for preparing stock assessment reports pursuant to section 117 of the Marine Mammal Protection Act. National Marine Fisheries Service Instruction 02-204-01.
Ex. M-0262	Scordino, J. J., M. Gosho, P. J. Gearin, A. Akmajian, J. Calambokidis, and N. Wright. 2017b. Individual gray whale use of coastal waters off northwest Washington during the feeding season 1984 – 2011: Implications for management. <i>Journal of Cetacean Research and Management</i> 16:57–69.
Ex. M-0311	Ilyashenko 2018. Needs of Chukotka indigenous people in Gray whale harvest products and rationale for updates to the paragraph 13(b)(2) of the Schedule (the Gray whale catch limit) SC/67B/AWMP/17
Ex. M-0411	Brüniche-Olsen, A., J. Urban R., V. V. Vertyankin, C. Godard-Coding, J. W. Bickham, and J. A. DeWoody. 2018a. Genetic data reveal mixed-stock aggregations of gray whales in the North Pacific Ocean. <i>Biology Letters</i> 14: 20180399. <a href="http://dx.doi.org/10.1098/rsbl.2018.0399">http://dx.doi.org/10.1098/rsbl.2018.0399</a>
Ex. M-0568	IWC. 2019b. Report of the Scientific Committee. Annex E. Report of the Standing Working Group on Aboriginal Subsistence Whaling Management Procedure (AWMP). <i>J Cetacean Res. Manage. Suppl</i> (20): 120-182.
Ex. M-0601	Treaty with the Makah, 1855. Jan. 31, 1855. 12 Stat., 939. Ratified Mar. 8, 1859. Proclaimed Apr. 18, 1859.
Ex. M-0603	Makah Whaling Ordinance. Adopted by Makah Tribal Council August 13, 2013.



Exhibit Number	Full Exhibit Title
SCHUBERT CROSS Ex. M-03	Petition for the Listing of the Gray Whale ( <i>Eschrichtius Robustus</i> ) Under the Endangered Species Act Submitted on behalf of Australians for Animals, The Fund for Animals. 2001.
<b>NMFS Exhibits</b>	
NMFS Ex. 1-6	NMFS 2015b. Memorandum from S. Stone (NMFS) to the file re: staff responses to comments on the 2008 draft environmental impact statement on the Makah Tribe's request to hunt gray whales. February 19, 2015.
NMFS Ex. 1-7	NMFS 2019a. Biological Report on the Eastern North Pacific (ENP) Stock of Gray Whales. Prepared by the West Coast Region of the National Marine Fisheries Service in support of the proposed waiver and regulations authorizing a limited hunt of ENP gray whales by the Makah Indian Tribe. March 2019.
NMFS Ex. 1-8	First response letter (7-11-17) from R. Lent (MMC) to B. Thom (NMFS) re: consultation on proposed waiver and regulations.
NMFS Ex. 1-9	NMFS 2019b. NMFS Protocol for Identifying Gray Whales Encountered in Makah Hunts. NMFS WCR Protected Resources Division Report. March 2019.
NMFS Ex. 1-10	First letter (5-12-17) from R. Lent (MMC) re: consultation on proposed waiver and regulations.
NMFS Ex. 1-11	MMC comments (7-31-2015) from R. Lent (MMC) to W. Stelle (NMFS) re: 2015 DEIS
NMFS Ex. 1-12	NMFS 2018. NMFS Protocol for Monitoring Makah Gray Whale Hunts. NMFS WCR Protocol Resources Division Report. December 2018.
NMFS Ex. 1-13	NMFS 2019c. Memorandum from C. Yates (NMFS) to the record re: responses to comments from the U.S. Marine Mammal Commission on a proposed waiver and regulations related to the Makah Indian Tribe's request for a waiver of the Marine Mammal Protection Act moratorium on take of eastern North Pacific gray whales
NMFS Ex. 1-14	Second letter (12-19-17) from B. Thom (NMFS) to R. Lent (MMC) re: consultation on proposed waiver and regulation.
NMFS Ex. 1-15	Second response letter (3-13-18) from P. Thomas (MMC) to B. Thom (NMFS) re: consultation on proposed waiver and regulations

Exhibit Number	Full Exhibit Title
NMFS Ex. 2-12	Carretta, J., and 15 co-authors. 2019. U.S. Pacific Marine Mammal Stock Assessments: 2018. NOAA-TM-NMFS SWFSC-617.
NMFS Ex. 2-13	Cooke, J.G. 2017. Updated assessment of the Sakhalin gray whale population and its relationship to gray whales in other areas. Western Gray Whale Advisory Panel, 18th Meeting. November 15-17, 2017. WGWAP-18/24.
NMFS Ex. 2-14	Gulland, F.M.D. 2006. Review of the Marine Mammal Unusual Mortality Event Response Program of the National Marine Fisheries Service. NOAA-TM-NMFS-OPR-33. September 2006.
NMFS Ex. 3-2	Weller, D. W., and 7 co-authors. 2013. Report of the National Marine Fisheries Service gray whale stock identification workshop. March 2013. NOAA Technical memorandum NOAA-TM-NMFS-SWFSC507.
NMFS Ex. 3-3	IWC. 2018a. International Convention for the regulation of Whaling, 1946. Schedule. As amended by the Commission at the 67th Meeting, Florianopolis, Brazil, September 2018.
NMFS Ex. 3-4	Fominykh, I.B. and R. Wulff. 2018. Monitoring in 2019 by the Russian Federation and the United States of the Aboriginal Subsistence Quota for Gray Whales Set by the International Whaling Commission. Agreement signed November 28, 2018 and December 7, 2018.
NMFS Ex. 3-5	Fominykh, I.B. and R. Wulff. 2017. Addendum to monitoring in 2017 by the Russian Federation and the United States of the Aboriginal Quota for Gray Whales Set by the International Whaling Commission. Agreement signed December 20 and 21, 2017.
NMFS Ex. 3-6	Fominykh, I.B. and R.F. Smith III. 2016. Addendum to monitoring by the Russian Federation and the United States of the aboriginal quota for gray whales set by the International Whaling Commission. Signed March 9, 2016, and February 29, 2016
NMFS Ex. 3-7	Ilyashenko, V. and D. DeMaster. 2012. Addendum to monitoring in 2012 by the Russian Federation and the United States of the Aboriginal Quota for Gray Whales Set by the International Whaling Commission. Agreement signed July 6, 2012.

Exhibit Number	Full Exhibit Title
NMFS Ex. 3-8	Ilyashenko, V. and D. DeMaster. 2007. Addendum to monitoring in 2007 by the Russian Federation and the United States of the Aboriginal Quota for Gray Whales Set by the International Whaling Commission. Agreement signed May 20, 2007.
NMFS Ex. 3-39	IWC. 2018. Report of the Fifth Rangewide Workshop on the Status of North Pacific Gray Whales. Report SC/67B/REP/07 Rev1.
NMFS Ex. 3-42	Durban, J.W., D.W. Weller, and W.L. Perryman. 2017. Gray whale abundance estimates from shore-based counts off California in 2014/15 and 2015/16. Paper SC/A17/GW/06 presented to the International Whaling Commission Scientific Committee.
NMFS Ex. 3-43	IWC. 2018b. Report of the Scientific Committee Bled, Slovenia, 24 April-6 May 2018. IWC/67/Rep01(2018).
NMFS Ex. 3-87	IWC 2019. Aboriginal subsistence whaling catches since 1995. Available online: <a href="https://iwc.int/table_aboriginalcite">https://iwc.int/table_aboriginalcite</a> . Last accessed July 31, 2019.
NMFS Ex. 3-89	Cooke, J.G., Taylor, B.L. Reeves, R. and Brownell Jr., R.L. 2018. <i>Eschrichtius robustus</i> (western subpopulation). The IUCN Red List of Threatened Species 2018.
NMFS Ex. 3-101	Calambokidis et al 2019. Updated analysis of abundance and population structure of seasonal gray whales in the Pacific Northwest, 1996-2017
NMFS Ex. 4-14	Cooke, J.G., O. Sychenko, A.M. Burdin, D.W. Weller, A.L. Bradford, A.R. Lang, and R.L. Brownell, Jr. 2019. Population assessment update for Sakhalin gray whales. Paper SC/68A/CMP/WP/07 presented to the International Whaling Commission Scientific Committee.
NMFS Ex. 4-15	Moore, J.E. and D.W. Weller. 2019. Memorandum from Jeff Moore (NMFS- SWFSC) to Chris Yates (NMFS-WCR/PRD) dated July 3, 2019, with attached draft NOAA Technical Memorandum titled "Estimates of the probability of striking a western North Pacific gray whale during the proposed Makah hunt: 2019."
<b>ALJ Exhibits</b>	
ALJ Ex. 002	Proposed Rule 84 FR 13604
ALJ Ex. 005	Final Hearing Agenda 84 FR 5936

Exhibit Number	Full Exhibit Title
ALJ Ex. 006	Draft Environmental Impact Statement on the Makah Tribe Request to Hunt Gray Whales (February 2015)
ALJ Ex. 008	NMFS West Coast Region's Draft Responses to Comments on the 2015 Draft Environmental Impact Statement on the Makah Tribe Request to Hunt Gray Whales (November 2019)
ALJ Ex. 009	NMFS West Coast Region's Draft Responses to Frequent Comments on the 2015 Draft Environmental Impact Statement on the Makah Tribe Request to Hunt Gray Whales (November 2019)
<b>NGO Parties Exhibits</b>	
Schubert Decl. Ex. 1	Comments of the Animal Welfare Institute, Cetacean Society International, International Marine Mammal Project of Earth Island Institute, Origami Whales Project, Whale and Dolphin Conservation, and the Whaleman Foundation in response to the 2015 Draft Environmental Impact Statement (DEIS) on the Makah Tribe Request to Hunt Gray Whales.
Ex. SVA-3	Villegas-Amtmann, S., Schwarz L.K., Sumich, J.L., Costa, D.P. (2015). A bioenergetics model to evaluate demographic consequences of disturbance in marine mammals applied to gray whales. <i>Ecosphere</i> 6(10): 183
Scordino Cross Ex. SS-02	Total Catches, International Whaling Commission, <a href="https://iwc.int/total-catches">https://iwc.int/total-catches</a>
Ex. CN-1	Curriculum Vitae of Carrie Newell
Ex. CN 5	Newell, C. A Guide to Summer Resident Gray Whales along the Oregon Coast (2013)