IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

NATURAL RESOURCES DEFENSE COUNCIL, et al.,

Plaintiffs,

v.

PENNY PRITZKER, et al.,

Defendants.
_____/

No. C -12-05380 EDL

***AMENDED* ORDER GRANTING IN PART AND DENYING IN PART PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT AND GRANTING IN PART AND DENYING IN PART DEFENDANTS' MOTION FOR SUMMARY JUDGMENT**

Plaintiffs, various environmental organizations and concerned individuals, seek injunctive relief against federal officials to limit the United States Navy's peacetime use of a low frequency sonar system for training, testing and routine operations.[1] This technology, Surveillance Towed Array Sensor System ("SURTASS") Low Frequency Active Sonar ("LFA"), sends out intense sonar pulses at low frequencies that travel hundreds of miles in order to timely detect increasingly quiet enemy submarines. The proposed action in the Final Supplemental Environmental Impact Statement ("SEIS") is the Navy's employment of up to four SURTASS LFA sonar systems in the ocean. Based on current operational requirements, routine training, testing and military operations using these sonar systems could occur in the Pacific, Atlantic, and Indian Oceans, as well as the Mediterranean Sea. See SEIS ES-6.

Plaintiffs charge that the National Marine Fisheries Service ("NMFS") improperly approved use of SURTASS LFA in many of the world's oceans in violation of the Marine Mammal

[1] Plaintiffs are Natural Resources Defense Council, Inc.; The Humane Society of the United States; Cetacean Society International; League for Coastal Protection; Ocean Futures Society; Jean-Michel Cousteau; and Michael Stocker. Defendants are Penny Pritzker, Secretary of the United States Department of Commerce; the National Marine Fisheries Service ("NMFS"); the Department of the Navy; Sam Rauch, Acting Assistant Administrator for Fisheries of NMFS; Jane Lubchanco, Administrator of the National Oceanic and Atmospheric Administration ("NOAA"), Ray Mabus, Secretary of the Navy, and Admiral Jonathan Greenert, Chief of Naval Operations.

Protection Act ("MMPA"), 16 U.S.C. §§ 1361-1421, the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531-1544, and the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321-4370. Plaintiffs claim that these violations will cause irreparable injury by harassing, injuring and killing marine mammals with sensitive hearing and other sea creatures, many of them rare and endangered, including whales, dolphins, seals, sea turtles and salmon. Defendants counter that they have fully complied with the applicable laws. Defendants argue further that enjoining the peacetime use of LFA sonar would harm national security because training and testing are necessary for military readiness, even though they would still be free to use it during wartime or periods of heightened threat.

This lawsuit, the third regarding the impact of SURTASS LFA on marine mammals and other sea life, challenges NMFS's Final Rule issued in August 2012 authorizing the Navy's use of LFA sonar in the world's oceans for five years. See Taking and Importing Marine Mammals: Taking Marine Mammals Incidental to U.S. Navy Operations of Surveillance Towed Array Sensor System Low Frequency Active Sonar, 77 Fed. Reg. 50,290 (Aug. 20, 2012). Plaintiffs allege that the 2012 Final Rule fails to ensure adequate protections for marine life and that Defendants have violated their obligations under the MMPA, the NEPA and the ESA to "engage in an informed, reasoned analysis of the LFA's effects on marine life and the best means of mitigating those harmful effects." Mot. at 2.

Before the Court are the parties' cross-motions for summary judgment. For the reasons stated in this Order, Plaintiffs' Motion for Summary Judgment is granted in part and denied in part and Defendants' Motion for Summary Judgment is granted in part and denied in part.[2]

Factual Background

The Navy developed SURTASS LFA to improve its ability to detect quiet foreign submarines. See SEIS (NAV10686-11785) 1-2, ES-5 to ES-10, 2-1 to 2-5.[3] The effectiveness of conventional submarine tracking technology in littoral areas, where future naval conflicts are most

[2] The Court issues this Amended Order pursuant to Federal Rule of Civil Procedure 60(a) to correct an oversight in the Court's ruling as to the Endangered Species Act.

[3] The Navy's administrative record is designated as "NAV___." Documents in the NMFS administrative record are cited as "AR____."

likely to occur, is degraded by high underwater background noise and difficult underwater acoustic propagation conditions. See SEIS 1-11. In these areas, naval forces may only have minutes to respond to hostile submarines. See NAV19928. To provide the reaction time needed to respond to the increased submarine threat and meet its long-range detection needs, the Navy investigated the use of a broad spectrum of acoustic and non-acoustic technologies, and LFA was the only system capable of providing reliable long range detection. See SEIS 1-5, ES-4 to ES-5 ("To meet this long-range submarine detection need, the U.S. Navy has investigated the use of a broad spectrum of acoustic and non-acoustic technologies. These are discussed in Subchapter 1.1.4. Of the technologies evaluated, LFA sonar is the only system capable of meeting the U.S. Navy's long-range ASW detection needs in a variety of weather conditions during the day and night. SURTASS LFA sonar is providing a quantifiable improvement in the Navy's undersea detection capabilities and therefore markedly improving the survivability of U.S. Naval forces in hostile ASW scenarios."). A Navy ship that employs LFA tows an underwater array of up to eighteen loudspeakers to generate low frequency sound waves that travel hundreds of miles in all directions underwater. See SEIS ES-7 to ES-8.

To prepare for all potential threats, the Navy must maintain anti-submarine warfare capabilities through continual training and operations in open-ocean and littoral environments. See SEIS 1-4. Without the SURTASS LFA capability, "the reaction times to enemy submarine threats would be greatly reduced and the effectiveness of close-in, tactical systems to neutralize threats would be seriously, if not fatally, compromised." SEIS 4-107, ES-23.

Marine mammals rely on sound for communicating, navigating, locating and capturing prey, and avoiding predators. See NAV24490. There are many sources of underwater sound, including shipping noise, sonar and other oceanographic communication and research, and natural phenomena such as earthquakes. See NAV17915. Man-made sound can sometimes disturb marine mammals. See id. Potential effects on marine mammals from SURTASS LFA sonar include permanent or temporary hearing loss, behavioral disruption, impaired communication, and non-auditory injuries. See SEIS ES-15. Low-frequency sources at low exposure levels and long distances can silence marine mammals, such as blue whales, significantly alter their calls, or drive

them from their habitat. See NAV19305-09 (study of seismic survey that altered blue whale communication).

In 1997-1998, the Navy conducted a Low Frequency Sound Scientific Research Program ("LFS SRP" or "SRP") regarding the immediately observable impacts of LFA technology on large whales. According to Plaintiffs, the SRP was limited in duration, scope and exposure level, and there have been new tagging technologies that have recorded the impacts on baleen whale foraging that the SRP did not detect. See Calambokidis Decl. ¶¶ 4-10. Further, although Plaintiffs point as an example to a recent study from January 2012 that found that humpback whale singing was silenced in the Stellwagen Bank National Marine Sanctuary by an intermittent, low-frequency sensor located 200 km away, this study was published after the Final Rule was published. See AR D27-32. A study from 2000 demonstrated the LFA system's ability to interfere with whale communication and breeding behavior, even at moderate intensities. See NAV28273-76. In addition, harbor porpoises and beaked whales are sensitive to man-made noise. See Weilgart Decl. ¶¶ 13, 16; AR F14510; AR F15537-40. Observed effects of low-frequency sound sources include temporary deafness, widespread habitat displacement, and startle responses in harbor porpoises. See SEIS 4-33; NAV27221-31. Sea turtles have exhibited avoidance, increased swimming and erratic behavior in response to acoustic disturbances. See SEIS 3-29, 4-25 to 4-26. Fish have also proven sensitive to high-intensity sound, with demonstrated effects ranging from widespread displacement to temporary hearing loss. See NAV22556-59; SEIS ES-13, 4-5 to 4-8, 4-14. However, although SURTASS LFA has the potential to disturb, or if not mitigated, injure, marine mammals (see AR 347), the Navy has completed over 150 SURTASS LFA missions over nearly eleven years and has not detected any resulting death or injury of any marine mammals. See SEIS 2-10, 4-42, 4-99, 4-100. Further, non-injurious, short-term behavioral disturbances observed by the system have consistently been below authorized levels. See AR C51, E68, 69, 71, G848; SEIS ES-20, ES-25-ES-26, 1-20, 2-15, 4-110, 7-24 to 7-25, 7-49, 7-54.

The 2012 Final Rule

This lawsuit challenges the five-year Final Rule published on August 20, 2012 governing the Navy's taking of marine mammals from LFA exercises for the following five years. See Taking

and Importing Marine Mammals: Taking Marine Mammals Incidental to U.S. Navy Operations of Surveillance Towed Array Sensor System Low Frequency Active Sonar, 77 Fed. Reg. 50290 (Aug. 20, 2012). The 2012 Final Rule allows for the issuance of annual Letters of Authorization ("LOAs") for up to four surveillance vessels. Id. at 50292.

The Navy must conduct operations so that no more than 12% of any marine mammal species or stock will be taken annually by Level B harassment, regardless of the number of vessels operating. AR E48, 54; 16 U.S.C. § 1362(18)(D) ("The term "Level B harassment" means . . . in the case of a military readiness activity . . . described in subparagraph (B), harassment described in subparagraph (B)(ii)."); 16 U.S.C. § 1362(18)(B)(ii) ("(B) In the case of a military readiness activity (as defined in section 315(f) of Public Law 107-314; 16 U.S.C. 703 note) . . . the term "harassment" means--. . . (ii) any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered."). NMFS found that the total estimated take would have no more than a negligible impact on marine mammal species or stocks, see AR C50-58, E48-49, 69-71, and that the required mitigation complied with the "least practicable adverse impact" standard, see AR E52, 72. The 2012 Final Rule permits LFA use in about 70-75% of the world's oceans. See 77 Fed. Reg. at 50303. Defendants point to the following as mitigation measures contained in the 2012 Final Rule: (1) designation of Offshore Biologically Important Areas ("OBIAs"); (2) use of a mitigation zone around the LFA source; (3) maintenance of a 12 nautical mile ("nm") coastal exclusion zone; and (4) issuance of Letters of Authorization.

1. Designation of Offshore Biologically Important Areas

Defendants argue that in the 2012 Final Rule, NMFS and the Navy developed a new designation process that addressed the Court's concerns as stated in the Court's orders in prior litigation in 2008. In the 2007 Final Rule, "an area could be designated as an OBIA only if it met a conjunctive test of being an area where: (a) marine mammals congregate in high densities, and (b) for a biologically important purpose." See SEIS 4-71. Under the new designation process, which was disclosed to the public in the August 2011 draft SEIS and was incorporated into the proposed

MMPA rule published in January 2012, a specific area falling outside of the 12 nm coastal standoff zone and other non-operational areas is eligible for OBIA designation if the best scientific evidence indicates that the area contains: (1) high densities of marine mammals; (2) known or defined breeding/calving grounds, foraging grounds or migration routes; or (3) small distinct populations of marine mammals with limited distributions. See AR E56; SEIS at 4-71 to 4-73, D-3 to D-4.

NMFS used the new screening criteria to review 403 marine protected areas ("MPAs") in potential LFA operating areas worldwide. See AR E56; SEIS at 4-73. Of the 403 MPAs, NMFS found that approximately 340 were ineligible because they either fell entirely within the 12 nm coastal standoff zone or they partially extended beyond the 12 nm zone, but there were no data indicating that the area outside of the 12 nm zone was biologically important. See AR E56; NAV5878-5940. NMFS reviewed the remaining areas under its screening criteria and identified a preliminary list of twenty-seven OBIA candidates for further review. See AR E56; SEIS 4-73.

NMFS convened a panel of eight subject matter experts ("SMEs") with marine mammal expertise in the Atlantic and Pacific Oceans, the Mediterranean Sea, the Indian Ocean/Southeast Asia, and Offshore Africa/South America. See SEIS 4-71. Five of the eight SMEs were senior NMFS scientists. See SEIS D-100. The SMEs provided analysis that resulted in a total of seventy-three OBIA candidates for further review. See AR E56; SEIS 4-71, 4-73 to 4-79, D-2 to D-6, D-100. NMFS assigned each candidate a score of zero (lowest) to four (highest) based on the quality of the supporting data. See AR E56 to E57; SEIS 4-72, 4-74, D-104. Areas ranked two or higher were eligible for further consideration, resulting in a revised list of forty-five OBIA candidates. See AR E56-57; SEIS at 4-74, D-101 to D-109. Potential OBIAs ranking below two lacked sufficient information for evaluation. See AR E56-57.

NMFS and the Navy performed an additional screening of the forty-five nominees to eliminate those that qualified solely for species in the mid-to-high frequency hearing groups, as those species have lower sensitivity to the LFA sonar signal, and to conduct a practicability assessment. See AR E57, C49; SEIS 4-74. This additional screening reduced the number of OBIA nominees to twenty-two, one of which was then eliminated due to practicability considerations. See AR C49-50; SEIS 4-80.

Plaintiffs argue that the screening for hearing sensitivity resulted in elimination of OBIAs that were proposed for marine mammals other than baleen whales, and in particular, eliminated twenty OBIAs that had been recommended for more than twenty species, as well as the Gully, an OBIA designated in the 2007 rule to protect its small population of bottlenose whales. See SEIS 4-84 to 4-93. NMFS eventually concluded that OBIAs were appropriate for endangered sperm whales even though they are not a baleen species, but stated that no candidate OBIA had been identified. See 77 Fed. Reg. at 50309.

After evaluating the public comments and new information, NMFS found that one other area qualified for OBIA designation, resulting in twenty-two OBIAs included in the 2012 Final Rule, fifteen of which are located outside of U.S. waters. See AR E57, 59, 74-77. NMFS identified several other areas that did not qualify as OBIAs, but that warranted further consideration under the adaptive management provisions of the 2012 Final Rule. See AR E51, 57, 59, 61.

Plaintiffs point out that, beginning in 2009, four SMEs, all senior NMFS scientists, raised concerns to the Office of Protected Resources ("OPR") about the treatment of ocean regions that were data-poor, that is, for which "data on cetacean distribution or population density are limited or lacking entirely." AR F2189. The OPR is the agency in charge of issuing the Final Rule. In April 2010, the four NMFS scientists submitted a White Paper to OPR in which they presented three specific recommendations for designating OBIAs in data-poor regions of the oceans. See AR F2189-93. As the White Paper explained: "When relevant cetacean data are lacking for the appropriate region or spatial scale, it is not acceptable to proceed in the decision making process as if the 'no data' scenario were equivalent to 'zero population density' or 'no biological importance.'" AR F2189. The SMEs also submitted data and information regarding seventy-three proposed OBIAs to NMFS. See SEIS 4-74 & Table 4-25. Many of these were excluded by the criteria for designation of OBIAs used in the process described above.

Plaintiffs also note that the Navy had identified several areas of biological importance to sea turtles and fish, including waters near olive ridley sea turtle nesting sites, designated critical habitat for green sturgeon, and restricted habitat for the totoaba, an endangered fish. See AR NAV1715-17, 1723-24. The Navy did not establish OBIAs in those areas. See SEIS 4-71. The

Navy also declined requests from NOAA's Office of National Marine Sanctuaries to extend its seasonal avoidance of several sanctuaries into year-round OBIA coverage for the protection of marine and non-marine mammals, and to enlarge its minimal buffer zone around sanctuary boundaries. See AR F9867-72; F18191-93; F19818-23, F24171-75.

2. Mitigation zone

The 2012 Final Rule requires the Navy to establish a mitigation zone around the LFA source that extends to the point at which the sound level attenuates to 180 decibels ("dB") (roughly one km from the LFA source), and an additional one km buffer around the mitigation zone, which extends to the point at which the sound level from the LFA sonar source attenuates to approximately 175 dB. See AR E58, 74. If a marine mammal is detected within or about to enter the two km mitigation zone, the Navy must delay or suspend LFA sonar operations. See id. The 180 dB threshold is a conservative estimate of the sound level above which an exposed marine mammal could experience physical injury. See AR C51, 58; SEIS ES-12, 1-19, 1-21, 4-43, C3 to C4. Only exposure to sound at levels greater than 180 dB is expected to cause actual injury. See id. Effects from exposures below 180 dB are limited to, at most, short-term, non-injurious behavioral disturbances potentially constituting MMPA Level B behavioral harassment. See AR C51, 57-58.

To ensure that marine mammals are detected before they enter the mitigation zone, the 2012 Final Rule prescribes visual monitoring, passive acoustic monitoring and active acoustic monitoring using the High Frequency Marine Mammal Monitoring (HF/M3) sonar system, which provides 24-hour, all-weather monitoring for marine mammals within the mitigation zone. With multiple pings, the HF/M3 system has high rates of effectiveness in detecting marine mammals of any size. See NAV19975-76 (2001 FEIS stating that "Analysis and testing of the HF/M3 sonar operating capabilities indicates that this system substantially increases the probability of detecting marine mammals within the LFA mitigation zone, and provides an excellent monitoring capability (particularly for medium-large marine mammals) beyond the LFA mitigation zone, out to 2 to 2.5 km."), 19979-80 (2001 FEIS stating that with multiple pings, the probability of detection for dolphins can approach 100 percent, and the probability of detecting a stationary whale can reach 95 percent); AR C57 ("Past results of the HF/M3 sonar system tests provide confirmation that the

system has a demonstrated probability of single-ping detection of 95 percent or greater for single marine mammals, 10m in length or larger, and a probability approaching 100 percent for multiple pings for any sized marine mammal."), E64 ("The HF/M3 active sonar system's effective detection probability for marine mammals within the SURTASS LFA sonar mitigation zone approaches 100 percent, based on multiple pings."), 71 ("Past results of the HF/M3 sonar system tests provide confirmation that the system has a demonstrated probability of single-ping detection of 95 percent or greater for single marine mammals, 10 m (32.8 ft) in length or larger, and a probability approaching 100 percent for multiple pings for any sized marine mammal."). The HF/M3 system operates continuously, transmitting multiple pings, while the LFA sonar system is deployed. See NAV19975-76, 19979-80.

3. 12 nautical mile coastal exclusion zone

The 2012 Final Rule prohibits the Navy from allowing the sound field created by the SURTASS LFA system to exceed 180 dB within 12 nautical miles ("nm") of any coastline, including offshore islands, and within a 1 km buffer around any OBIA during the period specified in the rule. See AR E74-77.

4. Letters of authorization process

The 2012 Final Rule requires that the Navy obtain an annual LOA from NMFS for each vessel that plans to conduct routine training, testing, and military operations involving the use of SURTASS LFA. AR E47. Each LOA must specify, among other things, "authorized geographic areas for incidental takings." AR E60 ("Based on its annual projected operational needs, the Navy will identify the particular geographic areas in which it intends to operate its four SURTASS LFA sonar vessels."), 69 ("Because it is infeasible to model enough representative sites to cover all potential SURTASS LFA operating areas, the Navy's application presented 19 modeled sites as examples to provide take estimates for potential operating areas based on the current political climate."), 78 ("(b) Each Letter of Authorization will set forth: . . . (2) Authorized geographic areas for incidental takings; . . ."). The 2012 Final Rule includes adaptive management provisions that allow NMFS and the Navy to specify additional OBIAs or other forms of mitigation in annual LOAs, if appropriate, based on new information. See AR E79. The Navy's LOA applications are

posted on NMFS's website, and NMFS must publish notice of issuance of any LOA in the Federal Register. See 50 C.F.R. § 216.106(d). There are four LOAs that expired in August 2013 covering eleven mission areas in the central and western North Pacific Ocean. AR I385-86, 411-12. Additional LOAs were issued in August 2013.

Standard of review

The Court reviews challenges under the MMPA, ESA, NEPA, and APA to ensure that the agency has not acted in a manner that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." Okanogan Highlands Alliance v. Williams, 236 F.3d 468, 471 (9th Cir. 2000); 5 U.S.C. § 706. "Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." Motor Vehicle Manufacturers Association of the United States, Inc. v. State Farm Mutual Automobile Ins. Co., 463 U.S. 29, 43 (1983). The Court's role is to:

> consider whether the [agency's] decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment. Although this inquiry into the facts is to be searching and careful, the ultimate standard of review is a narrow one. The court is not empowered to substitute its judgment for that of the agency. The final inquiry is whether the Secretary's action followed the necessary procedural requirements.

Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402, 416 (1971). "Although our inquiry must be thorough, the standard of review is highly deferential; the agency's decision is 'entitled to a presumption of regularity,'" and a court may not "substitute [its] judgment for that of the agency." San Luis & Delta-Mendota Water Authority v. Jewell, 2014 WL 975130, at *9, __ F.3d __ (9th Cir. Mar. 13, 2014) (quoting Citizens to Preserve Overton, 401 U.S. at 415-16). Moreover, "[w]hen specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive." Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 378 (1989).

> Where agency action is challenged on the record as arbitrary, capricious, and in violation of the procedures required by law, summary disposition is appropriate. Summary judgment is also appropriate in cases involving the issue of whether an

> EIS adequately explains environmental consequences of a proposed agency action.

Resources Ltd., Inc. v. Robertson, 789 F. Supp. 1529, 1534 (D. Mont. 1991) (citing Northern Spotted Owl v. Hodel, 716 F. Supp. 479 (W.D.Wash.1988) and Methow Valley Citizens Council v. Regional Forester, 833 F.2d 810, 815 (9th Cir.1987)).

Discussion

I. Marine Mammal Protection Act

The Marine Mammal Protection Act ("MMPA") was enacted in 1972 to prevent the extinction or depletion of marine mammal stocks as a result of man's activities. See 16 U.S.C. § 1361(1). "[S]uch species and population stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part, and, consistent with this major objective, they should not be permitted to diminish below their optimum sustainable population." 16 U.S.C. § 1362(2). The MMPA generally prohibits the taking of marine mammals, with certain statutory exceptions. See 16 U.S.C. § 1371(a)(3).

"Take" is defined as "to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect or kill, any marine mammal." 50 C.F.R. § 216.3; 16 U.S.C. § 1362(13). The definition of "take" includes any negligent or intentional act which results in disturbing or molesting a marine mammal. 50 C.F.R. § 216.3.

The MMPA generally defines "harassment" as "any act of pursuit, torment or annoyance" that:

> (i) has the potential to injure a marine mammal or marine mammal stock in the wild; or
>
> (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.

16 U.S.C. § 1362(18)(A). In 2003, the MMPA was amended to change the definition of "harassment" for purposes of military readiness activities such as those at issue here:

> (B) In the case of a military readiness activity . . . the term "harassment" means
>
> (i) any act that injures or has the *significant* potential to injure a marine mammal or marine mammal stock in the wild; or

> (ii) any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, *to a point where such behavioral patterns are abandoned or significantly altered.*

16 U.S.C. § 1362(18)(B) (emphasis added).

In general, the MMPA permits citizens of the United States who engage in a specified activity other than commercial fishing within a specified geographical region to petition the Secretary to authorize the incidental, but not intentional, taking of small numbers of marine mammals within that region. See 16 U.S.C. § 1371(a)(5)(A); 16 U.S.C. § 1362(12)(A). Such authorization is limited to a period of not more than five consecutive years. See 16 U.S.C. § 1371(a)(5)(A). With respect to military readiness activities, the Secretary shall authorize, for a period of not more than five years, the incidental, but not intentional, taking by any means, including harassment, of marine mammals if the Secretary:

> (I) finds that the total of such taking during each five-year (or less) period concerned will have a negligible impact on such species or stock and will not have an unmitigable adverse impact on the availability of such species or stock for taking for subsistence uses pursuant to subsection (b) of this section or section 1379(f) of this title . . . and
>
> (II) prescribes regulations setting forth--
>
> (aa) permissible methods of taking pursuant to such activity, and other means of effecting the least practicable adverse impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for subsistence uses; and (bb) requirements pertaining to the monitoring and reporting of such taking.
>
> (ii) For a military readiness activity (as defined in section 315(f) of Public Law 107-314; 16 U.S.C. 703 note), a determination of "least practicable adverse impact on such species or stock" under clause (i)(II)(aa) shall include consideration of personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity. Before making the required determination, the Secretary shall consult with the Department of Defense regarding personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

16 U.S.C. § 1371(a)(5)(A)(i). Thus, the determination of means for achieving the "least practicable adverse impact" from military readiness activities includes consideration of "personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity" in consultation with the Department of Defense. See 16 U.S.C. § 1371(a)(5)(A)(ii), (a)(5)(D)(vi).

At the hearing, Defendants argued that because the phrase "on such species or stock" is identical in both the negligible impact and the least practicable adverse impact subsections, 16 U.S.C. § 1371(a)(5)(A)(i)(I) and (II)(aa), these subsections should be similarly interpreted. There is no dispute that the subsection on negligible impact, 16 U.S.C. § 1371(a)(5)(A)(I), concerns the impact on the population as a whole. Defendants argue that the same language in the subsection on least practicable impact, 16 U.S.C. § 1371(a)(5)(A)(II)(aa), also addresses population level impacts.

Plaintiffs counter that Defendants' interpretation would effectively eliminate the mitigation requirement: if the agency finds a negligible impact, the agency is obligated to identify mitigation measures under the least practicable adverse impact prong, but if the least practicable impact standard is the same as the negligible impact standard, then there is no need for mitigation. However, the two standards do not have to be identical just because they both address population level impacts. Even if the impact on the population is negligible under 16 U.S.C. § 1371(a)(5)(A)(i)(I), the agency could still impose mitigation that would further reduce the impact on the population to the least practicable under 16 U.S.C. § 1371(a)(5)(A)(i)(II)(aa). Further, the legislative history indicates that Congress envisioned a situation in which the mitigation measures would render the impact negligible when it otherwise would not be. See 132 Cong. Rec. S16292-01, 1986 WL 788463 ("It is intended that if the Secretary finds that mitigating measures would render the impact of a proposed activity negligible when it would not otherwise satisfy that requirement, the Secretary shall require such measures by regulation under subparagraph (5)(A)(ii) as a condition of the authorization for any such incidental taking.").

Plaintiffs point out that the legislative history of the MMPA shows that Congress sought to provide the maximum protection for marine mammals. See also Anderson v. Evans, 371 F.3d 475, 497 (9th Cir. 2004) (noting conservation purpose of MMPA); 16 U.S.C. § 1361(2) (the major objective of the MMPA is to ensure that marine mammals continue to be "significant functioning element[s] in the ecosystem,". . . and "[marine mammals] should not be permitted to diminish below their optimum sustainable population."). The Anderson court stated: "One need only review Congress's carefully selected language to realize that Congress's concern was not merely with

survival of marine mammals, though that is of inestimable importance, but more broadly with ensuring that these mammals maintain an 'optimum sustainable population' and remain 'significant functioning elements in the ecosystem.'" 16 U.S.C. § 1361. This congressional intent, however, is consistent with a focus on population level impacts. Moreover, the findings and policies of the MMPA do not direct agencies to address impacts on individual mammals in isolation, as opposed to on species or stock. See 16 U.S.C. § 1361 ("The Congress finds that--(1) certain species and population stocks of marine mammals are, or may be, in danger of extinction or depletion as a result of man's activities; (2) such species and population stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part, and, consistent with this major objective, they should not be permitted to diminish below their optimum sustainable population. . . ; (3) there is inadequate knowledge of the ecology and population dynamics of such marine mammals and of the factors which bear upon their ability to reproduce themselves successfully; (4) negotiations should be undertaken immediately to encourage the development of international arrangements for research on, and conservation of, all marine mammals; . . ."). Therefore, the Court will consider whether there is a negligible impact at the population level and whether the regulations include measures to achieve the least practicable adverse impact on the species and stocks as a whole. Of course, in small populations, harm to a few or even one member can harm the population as a whole.

Plaintiffs argue that NMFS's issuance of the Final Rule violated the MMPA in two ways: (1) by arbitrarily and capriciously adopting mitigation and monitoring measures that fail to ensure that SURTASS LFA has the "least practicable adverse impact" on affected marine mammals; and (2) by failing to ensure that LFA's impacts on marine mammal species and stocks will be negligible.

1. Least Practicable Adverse Impact

As set forth above, the MMPA requires that when an incidental take permit is issued, NMFS must prescribe "permissible methods of taking . . . and other means of effecting the least practicable adverse impact" on marine mammals, and must set "requirements pertaining to the monitoring and reporting of such taking." 16 U.S.C. § 1371(a)(5)(A)(i)(II)(aa), (bb). Regulations must be based on the "best scientific evidence available." 50 C.F.R. §§ 216.102(a); 216.105(c)

("The taking of small numbers of marine mammals under section 101(a)(5) (A) through (D) of the Marine Mammal Protection Act may be allowed only if the National Marine Fisheries Service: (a) Finds, based on the best scientific evidence available, that the total taking by the specified activity during the specified time period will have a negligible impact on species or stock of marine mammal(s) and will not have an unmitigable adverse impact on the availability of those species or stocks of marine mammals intended for subsistence uses; . . . .").

Defendants argue that the requirement that the evidence be "available" means that NMFS has "no obligation to conduct independent studies," but may not "disregard[] available scientific evidence that is in some way better than the evidence [NMFS] relies on." Southwest Center for Biological Diversity v. Babbitt, 215 F.3d 58, 60 (D.C. Cir. 2000). The requirement to adopt measures to ensure the "least practicable adverse impact" on marine mammals is "a stringent standard." NRDC v. Evans, 279 F. Supp. 2d 1129, 1159 (N.D. Cal. 2003). "Although the agency has some discretion to choose among possible mitigation measures, it cannot exercise that discretion to vitiate this stringent standard." Id. Plaintiffs argue that Defendants arbitrarily and capriciously failed to ensure that LFA had the least practicable adverse impact on marine mammals because the identification of OBIAs was flawed and because the 12 nm coastal exclusion zone is too narrow.

A. Identification of OBIA areas

i. Data-poor regions

There is no dispute that there are some regions of the ocean for which there is little or no data on the distribution and behavior of marine mammals. See 77 Fed. Reg. at 50301 ("We recognize that baseline data on the distribution and behavior of marine animals are limited for certain areas of the world's oceans."); see also SEIS D-14 (NMFS stated that some OBIAs recommended by the SMEs will have less information available than those preliminarily identified by NMFS, and therefore, the experts should rely on their professional opinions as well as other sources of information to support their recommendations). Plaintiffs argue that data-poor areas implicate the vast majority of the Navy's operating area, and that ensuring the least practicable adverse impact in those areas is undoubtedly "an important aspect of the problem" that Defendants arbitrarily and capriciously failed to adequately consider. Motor Vehicles Mfg. Ass'n of Am. v.

State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) ("Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."). Plaintiffs argue that Defendants' criteria for identifying OBIAs ignores the problem of data-poor regions and runs afoul of its own experts' opinions by demanding site-specific data that does not exist for most of the world's oceans.

Plaintiffs' main argument is that Defendants arbitrarily disregarded the recommendations of their own NMFS experts in the 2010 White Paper: Identifying Areas of Biological Importance to Cetaceans in Data-Poor Regions. The White Paper stated that "management decisions affecting such data-poor regions should not proceed as if cetacean population density were zero or as if those areas were biologically unimportant." AR F2191, 2189. The White Paper concluded that "proven ecological principles" suggest a precautionary approach that will protect three types of areas with OBIA designation or other protections:

> (1) continental shelf waters and waters 100km seaward of the continental slope;
>
> (2) 100 km around all islands and seamounts that rise within 500 m of the surface; and
>
> (3) regions of high primary productivity, which are known to correspond to sperm whale distribution.

AR F2192. These recommendations stemmed from "a precautionary approach" designed to "minimiz[e] the chances of overlooking biologically important areas." AR F2190-91.

Defendants counter that the Final Rule did not arbitrarily or capriciously fail to address the issue of data-poor regions raised in the White Paper. Defendants argue that rather than simply making speculative assumptions about data-poor areas, they employed a multiple-step OBIA designation process to identify key areas of biological importance to marine mammal low-frequency hearing specialists and certain other species because of the presence of one or more of the following: high densities of animals, known breeding/calving grounds, foraging grounds, migration routes, or small distinct populations with limited distributions. See SEIS 7-34 ("Again, the primary reason for

establishing OBIAs for SURTASS LFA sonar is to minimize impacts and adverse effects to marine mammals and marine turtles in key areas outside of the 22 km (12 nmi) coastal restriction. . . . Thus, in selecting areas where the Navy will and will not operate SURTASS LFA sonar, both agencies must rely on what is known about marine mammal concentrations and attempt to avoid them, continue to fill knowledge gaps through additional research, and recognize that, by necessity, NMFS is regulating in a dynamic area of science."); AR E54 ("We designated OBIAs based on certain criteria and the best available information we had for marine mammals to determine if any areas met the criteria. In some cases, we designated an OBIA because a species listed under the Endangered Species Act has designated critical habitat, breeds, calves, migrates, or forages in a particular area."), 56 ("We designate OBIAs (based upon qualifying criteria) to protect marine mammals in areas that are biologically important for them. For this process we used the best available data to assess ocean areas greater than 22 km (14 mi; 12 nm) from any shoreline with: (1) High densities of marine mammals; (2) known/defined breeding/calving grounds, foraging grounds, migration routes; or (3) small, distinct populations of marine mammals with limited distributions."), 58 ("For scenarios in which cetacean distribution or density data are scarce or completely lacking, such as in open ocean areas outside of the United States, our ability to quantitatively or qualitatively validate cetacean-habitat model predictions may be limited or biased. In these situations, model validation must rely on multiple sources of scientific knowledge (including, but not limited to: Personal observations of distribution and density; known migration routes; ecosystem dynamics, such as inter-specific competition; seasonality and environmental regime shifts; live strandings; range expansions or contractions due to changes in population size; and historic whaling data) or indigenous/local knowledge."), 62 ("Until such time that more robust information becomes available that supports the biological criteria (i.e., marine mammals present in high densities or an area on the slope with known/defined breeding/calving grounds, foraging grounds, migration routes, or an area with small, distinct populations of marine mammals with limited distributions) on the continental slope of the northern Gulf of Mexico, we do not designate this area as an OBIA for SURTASS LFA sonar operations.").

NMFS found that areas containing high densities of animals, known breeding/calving

grounds, foraging grounds, migration routes, or small distinct populations with limited distributions warranted special protection beyond that afforded by the monitoring and shutdown requirements and other mitigation measures which applied in all areas, including in data-poor regions. See C51 ("NMFS believes that the shutdown in the LFA sonar mitigation and buffer zones, visual monitoring, passive acoustic monitoring, active acoustic monitoring using HF/M3 sonar with ramp-up procedures, and geographic restriction measures proposed will enable the Navy to: (1) Avoid Level A harassment of marine mammals; (2) Minimize the numbers of marine mammals exposed to SURTASS LFA sonar sound associated with TTS; and (3) Minimize the numbers taken specifically during times of important behaviors, such as feeding, migrating, calving or breeding."); AR E60-61 ("Recognizing that many areas throughout the world's oceans currently have few data to support an OBIA designation at this time, we and the Navy will continue to conduct literature reviews under the adaptive management provision of this regulation.").

Defendants argue that NMFS considered the White Paper recommendations for data-poor regions, but properly chose a different approach. See League of Wilderness Defenders Blue Mountains Biodiversity Project v. Allen, 615 F.3d 1122, 1131 (9th Cir. 2010) ("Our highest deference is owed to the Forest Service's technical analyses and judgments within its area of expertise, Lands Council, 537 F.3d at 993; nonetheless, our dissenting colleague would have us halt the Forest Service's Project because he does not like the Forest Service's approach to solving the problems addressed. We went en banc to foreclose precisely this type of second-guessing of the Forest Service."); cf. San Luis & Delta-Mendota Water Authority v. Jewell, 2014 WL 975130, at *17, __ F.3d __ (9th Cir. Mar. 13, 2014) (A court's "deference to agency determinations is at its greatest when that agency is choosing between various scientific models . . . ."). NMFS found that the White Paper recommendations did not meet the criteria established for designating OBIAs, explaining that there had to be "enough information for us to verify that [a specific area] met our defining criteria, because in our view it is not appropriate to designate OBIAs without sufficient scientific justification." AR E62.

Plaintiffs contend that Defendants' rationale for ignoring its experts' recommendations for data-poor regions is arbitrary and capricious. Plaintiffs argue that under NMFS's rules, areas may

be designated as OBIAs on the basis of expert opinion, such as the White Paper, and that NMFS erred in not designating OBIAs recommended by the White Paper scientists. AR F2188, 2194 ("NMFS's criteria *include* the use of expert opinion. Based on expert opinion, we expect there to be relatively high densities of cetaceans in all of the areas we have specifically identified or have implicitly identified using general ecological principles.") (emphasis in original); SEIS D-3 ("NMFS anticipates that the Experts will use peer reviewed literature, technical reports, or his/her own specific expertise and professional experience, along with other data sources to justify their additions, modifications, or deletions to the list of preliminary OBIA Nominees.").

In particular, Plaintiffs argue that Defendants arbitrarily failed to provide a reasonable justification for choosing not to follow the advice in the White Paper, citing Western Watersheds Project v. Kraayenbrink, 632 F.3d 472, 492-93 (9th Cir. 2011) ("Here, the BLM failed to address concerns raised by its own experts, FWS, the EPA, and state agencies. For example, the BLM offered no reasoned analysis whatsoever in support of its conclusion—which *is in direct conflict with the conclusion of its own experts* and sister agency, FWS—that there will be no environmental effect caused by both the across-the-board reduction in public involvement in management of grazing on public lands and the elimination of public input into particular management decisions.") (emphasis added). The White Paper did not recommend specific OBIAs, however, but instead provided guidelines for inferring the presence of areas of biological importance for cetaceans in general. See AR F2191-92 ("For the data-poor scenario, we recommend that general guidelines based on proven ecological principles be used to identify likely areas of biological importance for cetaceans. . . . Management decisions affecting such data-poor regions should not proceed as if cetacean population density were zero or as if those areas were biologically unimportant. To infer cetacean distribution and biological importance in these cases, it is better to rely upon basic ecological principles than to use an analytical model that possibly provides predictions on a finer spatial scale or taxonomic level, but whose predictions cannot be adequately evaluated."). At the same time, the White Paper acknowledged that the "precautionary" approach that it advanced risked designating OBIAs in areas of "marginal biological importance" that did not meet NMFS's criteria. AR F2190. Further, while the thrust of the paper favored the precautionary approach, it specifically

disclaimed choosing that approach over the alternative "pure" approach that relied solely on more specific local data, resulting in fewer OBIAs:

> In other words, it must be decided whether the list of OBIAs should be comprehensive (based on the precautionary approach) or pure (based on the minimalistic approach). We do not provide an answer to this question here, but we do suggest guidelines for decision making based upon the precautionary approach.

AR F2190.

NMFS chose the pure approach and explained its decision in the record, including reference to the White Paper and reasons for choosing a different approach. The agency stated that it was not proceeding as if data-poor regions were biologically unimportant, but instead relied on other mitigation measures to protect cetaceans outside of designated OBIAs. See F18059 (commenting on the White Paper: "OBIAs are but one component of required mitigation measures designed to effect the least practicable adverse impact on marine mammals. For areas with little or no survey data that do not meet our OBIA screening criteria, the final rule provides mitigation and monitoring measures that incorporate precautionary principles for marine mammals. This includes: requiring the Navy to conduct visual, passive acoustic, and active acoustic monitoring for marine mammals; and requiring the Navy to delay/shutdown active SURTASS LFA sonar transmissions when they have detected a marine mammal within 2 km of the vessel by visual, passive acoustic, and active acoustic monitoring protocols."); AR F2066-67 (further commenting on the White Paper, "If NMFS were to proceed without designating these areas as OBIAs, there is no assumption that the population density was zero or that the area was biologically unimportant – rather there is insufficient evidence to show that it is specifically of increased importance based on the selection criteria for OBIA for SURTASS LFA at this time."); E60-61 (Final Rule: "Our process for selecting, assessing, and designating OBIAs for SURTASS LFA sonar relies on three specific screening criteria for biological importance for marine mammals. . . . That said, we recognize that the ecological processes recommended by the commenters support cetacean habitats and have considered their guidance in reviewing and designating OBIAs. Information regarding data poor areas is likely to evolve over the five year course of the final rule and beyond, and NMFS will consider new information to continue identifying OBIAs for SURTASS LFA sonar operations."); AR F18059-60; AR E60-61 (noting that: "The NRDC and several other commenters recommended

that we consider the approach of using proxies such as: persistent oceanographic features (e.g., high primary productivity and nutrient enrichment processes); relative densities of non-marine mammal species (i.e., apex predators and fish); all continental shelf waters and waters 100 km (62 mi) seaward of the continental slope; waters within 100 km (62 mi) of all islands and seamounts that rise within 500 meters (1,640 feet) to identify marine mammal hotspots or supplement our OBIA analysis in data-poor regions. Response: OBIAs are but one component of a suite of required mitigation and related monitoring measures designed to effect the least practicable adverse impact on marine mammals.").

Defendant also argues that the best available data standard (50 C.F.R. § 216.102(a)) is met by requiring sufficient evidence that a specific area meets the criteria for the particular species of concern. See Latino Issues Forum v. EPA, 558 F.3d 936, 941 (9th Cir. 2009) ("In particular, where, as here, a court reviews an agency action 'involv[ing] primarily issues of fact,' and where 'analysis of the relevant documents requires a high level of technical expertise,' we must 'defer to the informed discretion of the responsible federal agencies.") (internal citations omitted); Consolidated Salmonid Cases, 791 F. Supp. 2d 802, 821 (E.D. Cal. 2011) ("What constitutes the 'best' available science implicates core agency judgment and expertise to which Congress requires the courts to defer; a court should be especially wary of overturning such a determination on review."). Even though the precautionary approach appears more protective of marine mammals, the Court cannot substitute its judgment for the one chosen by NFMS, especially when the White Paper experts on which Plaintiffs rely declined to answer the question whether the list of OBIAs should be based on the precautionary or the pure approach. See Ocean Advocates v. U.S. Army Corps of Eng'rs, 402 F.3d 846, 858 (9th Cir.2005) ("This review is 'searching and careful,' but the arbitrary and capricious standard is narrow, and we cannot substitute our own judgment for that of the [agency].").

Turning to specific potential OBIAs, Plaintiffs challenge NMFS' rejection of an OBIA for established baleen whale habitat around seamounts in the Northwest Pacific Ocean. See, e.g., 77 Fed. Reg. at 50306 (citing lack of specific evidence regarding densities and biological uses of area around Emperor Seamount Chain and Shatsky Rise area). The agency also rejected an OBIA for Challenger Bank (located in continental shelf waters off of Bermuda) as not having sufficient

scientific justification despite humpback whale observations and three scientific studies noting the area as a possible foraging and migratory site. See 77 Fed. Reg. at 50304. Plaintiffs also state that Defendants ignored OBIA recommendations made by Dr. Guiseppe Notarbartolo di Sciara, the leading expert on Mediterranean marine mammals and former head of the ACCOBAMS[4] even though he submitted considerable documentation to support his recommendations and several of the areas recommended as OBIAs overlap with areas proposed as cetacean protected areas by the ACCOBAMS Scientific Committee in 2006. See AR F2155-57; Hoyt Decl. ¶ 19 (noting ACCOBAMS-recommended areas in Mediterranean excluded from OBIA protection). In addition, Plaintiffs point to an area in Australia that was identified by expert Rob McCauley as habitat for 22,000 humpback whales from late May until October, which NMFS failed to designate as an OBIA. See AR F2230. While these areas could well have been suitable for OBIAs under different criteria, Defendants addressed them in the administrative record and the SEIS. See Defs.' MSJ at n.4 (citing administrative record references for each of these recommendations); see, e.g., E56 (Final Rule noting that two OBIAs were proposed in Australia, but were found not to meet the criteria).

In addition, Plaintiffs argue that NMFS ignored the Fairweather Grounds in Alaska that was recommended as an OBIA by SME Ferguson. See AR F1522. Ferguson noted the longstanding recognition of Fairweather Grounds as a whaling ground, its concentration of food sources for humpback whales, a 2004 NOAA survey of the area, and local fishermen's anecdotal reports. See AR F1522. The record and the SEIS reflect that Defendants also considered this area for a potential OBIA. See SEIS 4-82 (SEIS section on Fairweather Grounds, stating that there was inadequate scientific support for it as an OBIA), D-181 (same), AR F3248 ("After reviewing available data, it was concluded that there are no published, peer-reviewed, or gray literature discussing this area as a specific, important feeding area for humpbacks. Only sighting data was from a single observation of high density of humpbacks during three days in summer of 2004 as part of the SPLASH project. No follow-up surveys done in area. Final SPLASH report did not mention Fairweather Grounds as a foraging area nor recommended it for further study (Calambokidis, et al., 2008)."), 3280 ("No

[4] ACCOBAMS stands for: Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and continuous Atlantic Area Scientific Committee and president of the European Cetacean Society.

published, peer-reviewed, or gray literature discussing this area [Fairweather Grounds] as a specific, important feeding area for humpback whales."). The agency concluded that the available data "are not adequate scientific support to warrant setting aside Fairweather Grounds as an LFA OBIA for marine mammals." SEIS 4-82. In particular, as stated at the hearing, Defendants noted that the evidence supporting the Fairweather Grounds as an OBIA was not sufficient because the NOAA report from 2004 only covered a three day period during which whales were observed, whereas no whales were observed on a return visit. Another report cited as support for the Fairweather Grounds as an OBIA was from 1869, and the anecdotal reports were not persuasive. See Trout Unlimited v. Lohn, 559 F.3d 946, 959 (9th Cir. 2009) ("It is not our role to ask whether we would have given more or less weight to different evidence, were we the agency.").

Above all, Defendants emphasize that "in areas not designated as an OBIA (either because they did not meet the criteria or because there weren't sufficient data to support the designation), the regulation provides measures that protect marine mammals nevertheless." AR E58 ("The subject matter experts' inputs were a crucial component of our selection processes; however, they were only one component. We as the action agency are responsible for the final selection of the SURTASS LFA sonar OBIAs. Because we independently evaluated the subject matter expert's input as well as available data/ information for each recommended OBIA, we do not believe that effort bias on the part of the subject matter experts was a factor in our determinations."). NMFS argues further that as new data becomes available, new OBIAs can be designated in annual LOAs under the Final Rule's adaptive management approach. See AR E61 ("Information regarding data poor areas is likely to evolve over the five year course of the final rule and beyond, and NMFS will consider new information to continue identifying OBIAs for SURTASS LFA sonar operations. Under our adaptive management framework, we will consider these factors along with our selection criteria to consider future modifications to the OBIA list. This provides a mechanism for NMFS and the Navy to modify (or add or delete) mitigation or monitoring measures, as appropriate, based on new information."); SEIS 7-34 ("The Navy has included within its adaptive management component of the MMPA rulemaking, means to consider, on a case-by-case basis, new/revised peer-reviewed and published scientific data and information from qualified and recognized sources within academia, industry,

government, and non-government organizations to determine modifications to the OBIA list, if new scientific data indicate that such modifications would be appropriate. This would include, as appropriate, additional OBIAs."). As stated in the Court's 2008 Order, however, the duty to adopt in advance measures to ensure the least practicable adverse impact cannot be met simply by deferring to potential unknown future measures. See Feb. 6, 2008 Order at 15. Therefore, this rationale is not persuasive.

Defendants also point out that some Level B take does not necessarily mean that the mitigation measures adopted are inadequate. 50 C.F.R. § 216.102(b); AR C56 ("A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (i.e., population-level effects). An estimate of the number of Level B harassment takes, alone, is not enough information on which to base an impact determination."), G706-07 (Level B harassment "occurs at the level of the individual(s) and does not assume any resulting population-level consequences."). NMFS found that with all of the mitigation measures combined, Level B take would be unlikely to have any population effects. See AR E71 ("In summary, based on these analyses, the past nine years of SURTASS LFA sonar operations, and results from the LFS Scientific Research Program, we do not anticipate that SURTASS LFA sonar operations will likely have adverse effects on annual rates of recruitment or survival (i.e., population-level effects)."), C55 (" Level B (behavioral) harassment occurs at the level of the individual(s) and does not assume any resulting population-level consequences."), 56-58 ("An estimate of the number of Level B harassment takes, alone, is not enough information on which to base an impact determination."). The MMPA does not require that each mitigation measure standing alone be sufficient to achieve the least practicable adverse impact, but rather that they do so collectively. See, e.g., AR E50 ("OBIAs are but one component of a suite of required mitigation and related monitoring measures designed to effect the least practicable adverse impact on marine mammals. The regulation prescribes mitigation and monitoring measures for SURTASS LFA sonar operations in areas that have persistent oceanographic features and seamounts and island chains that did not meet our OBIA criteria or fall within the 22 km (14 mi; 12 nm) coastal exclusion zone. The Navy is to delay/shutdown active SURTASS LFA sonar transmissions when they detect a marine mammal within the 2-km (1.2-mi;

1.1-nm) LFA sonar mitigation and buffer zones around the vessel by visual, passive acoustic, and active acoustic monitoring protocols, effectively ensuring that marine mammals are not exposed to sound levels that exceed 175 dB re: 1 mPa.").

Defendants concluded that their monitoring/shutdown procedure makes it very unlikely that marine mammals, including animals in data-poor regions, would be injured by Level B harassment. See AR E64 (Final Rule: "The HF/M3 active sonar system's effective detection probability for marine mammals within the SURTASS LFA sonar mitigation zone approaches 100 percent, based on multiple pings. Combined with the passive acoustic (estimated 25 percent detection probability) and visual monitoring (estimated nine percent detection probability) requirements, all three systems together have an effective detection probability of at least 99 percent at 1 km (0.62 mi; 0.54 nm) from the vessel. Based upon our review of nine years of data from monitoring reports on previous SURTASS LFA sonar activities (i.e., the best available information), we consider the likelihood of the Navy not detecting a marine mammal within the SURTASS LFA sonar mitigation zone to be extremely small (less than one percent)."), E69-71 (Final Rule: "We do not expect that marine mammals would be injured by SURTASS LFA sonar because a marine mammal should be detected through the three-part monitoring program (visual, passive acoustic and active acoustic monitoring) and the Navy would suspend or delay active transmissions. The probability of detection of a marine mammal by the HF/M3 active sonar system within the SURTASS LFA sonar mitigation zone approaches 100 percent based on multiple pings. . . '"). The HF/M3 system performs a full sweep of the 2 km mitigation zone every 45-60 seconds, and must be ramped up to full operational power at least twenty-five minutes before LFA use begins. See NAV 19975; AR C18; E74. The system sweeps the 2 km zone at least twenty-five times before the first LFA transmission is sent, and with five pings, the probability that the system will detect a marine mammal of any size within the 1 km mitigation zone approaches 100 percent. NAV19980 (stating in the 2001 FEIS that with multiple pings, the detection rate approaches 100 percent for most animals). Thus, there is evidence that the HF/M3 system is effective.

Nonetheless, it is troubling that the SMEs stated in the White Paper that: "We consider the other forms of mitigation are considerably less effective than specifying OBIAs." AR F2195. This

statement casts doubt on Defendants' conclusion that their other mitigation measures fully compensate for any deficiencies in the designation of OBIAs. At the same time, the SMEs acknowledged that the alternative precautionary approach could result in over-designation of OBIAs of only "marginal biological importance" to marine mammals. AR F2190. While a close question, given the deferential standard of review, on balance, Defendants have not acted arbitrarily and capriciously regarding data-poor regions.

ii. Protections for previously recognized OBIAs

Plaintiffs also argue that NMFS reduced or removed OBIA protection from two areas without any reasoned justification: (1) 200-meter isobath off the United States East Coast; and (2) Monterey Bay, Gulf of Farallones, and Cardell Bank National Marine Sanctuaries. These areas were recognized as OBIAs in 2002 and 2007. Plaintiffs argue that Defendants must "supply a reasoned analysis" for its decision to "change course" and reduce that protection in the current Final Rule. The reasoned analysis standard, however, is not onerous. In FCC v. Fox Television Stations, 556 U.S. 502, 515-16 (2009), the Court explained:

> To be sure, the requirement that an agency provide reasoned explanation for its action would ordinarily demand that it display awareness that it is changing position. An agency may not, for example, depart from a prior policy sub silentio or simply disregard rules that are still on the books. See United States v. Nixon, 418 U.S. 683, 696, 94 S.Ct. 3090, 41 L.Ed.2d 1039 (1974). And of course the agency must show that there are good reasons for the new policy. But it need not demonstrate to a court's satisfaction that the reasons for the new policy are better than the reasons for the old one; it suffices that the new policy is permissible under the statute, that there are good reasons for it, and that the agency believes it to be better, which the conscious change of course adequately indicates. This means that the agency need not always provide a more detailed justification than what would suffice for a new policy created on a blank slate. Sometimes it must—when, for example, its new policy rests upon factual findings that contradict those which underlay its prior policy; or when its prior policy has engendered serious reliance interests that must be taken into account. Smiley v. Citibank (South Dakota), N. A., 517 U.S. 735, 742, 116 S.Ct. 1730, 135 L.Ed.2d 25 (1996). It would be arbitrary or capricious to ignore such matters. In such cases it is not that further justification is demanded by the mere fact of policy change; but that a reasoned explanation is needed for disregarding facts and circumstances that underlay or were engendered by the prior policy.

Id.

During the administrative process, NMFS cautioned that prior OBIAs might not continue to qualify as biologically important for marine mammals. See AR F1 (internal NOAA email regarding researching OBIAs: "As you can see, some of the above-mentioned [prior] OBIAs do not

qualify as a true OBIA, but were accepted by the Navy to obtain the approval of the National Marine Sanctuary Program."). The agency deliberately took a new look at all OBIAs. See, e.g., C49 ("As with the previous SURTASS LFA sonar rulemakings, the Navy's application again proposed establishing offshore biologically important areas, OBIAs, for marine mammal protection. In preparation for this rule making, NMFS developed a more systematic process for selecting, assessing and designating OBIAs for SURTASS LFA sonar. . . . NMFS used the screening criteria to review 403 existing and potential marine protected areas based on the World Database on Protected Areas (IUCN and UNEP, 2009), Holt (2005), and prior SURTASS LFA sonar OBIAs to produce a preliminary list of 27 OBIA nominees."), F15336 (internal NOAA email regarding OBIAs for beaked whales and harbor porpoises: "Although past MMPA rules for LFA sonar have included designated OBIAs, a recommendation from the court drove NMFS and the Navy to take a harder look (for the proposed 2012 MMPA rule) at how OBIAs are designated to ensure that the process is more systematic and comprehensive than previously used. Therefore, in 2010, new OBIA criteria were designated, preliminary areas were identified by NMFS, and an expert panel was convened to verify the preliminary areas and identify any additional areas they thought appropriate based on the criteria.").

a. 200-meter isobath on the United States East Coast

Under the previous final rules, the entire 200-meter isobath was protected as a year-round OBIA. See 67 Fed. Reg. 46712, 46787 (July 2002); 72 Fed. Reg. at 46,892 (August 2007). The area is a migration corridor for the North Atlantic right whale, the world's most endangered large whale species. See 67 Fed. Reg. at 46748, 46750 ("NMFS has established an OBIA for the entire known range for the East Coast population of the North Atlantic right whale."); 72 Fed. Reg. at 46869 ("The area from the coastline to the 200 m (656-ft) isobath of the North American East Coast is protected as an OBIA year-round which protects the North Atlantic right whale migration route and its critical habitat from SPLs greater than 180 dB."); SEIS D-142 ("Right whales are the world's most endangered large whale species, and the GSC [Great South Channel on the East Coast] is the principal feeding ground of the western North Atlantic population.").

In the 2012 Final Rule, NMFS replaced the prior OBIA with four smaller OBIAs within the

200-meter isobath that do not encompass the entire area previously protected. See 77 Fed. Reg. at 50308 ("We reviewed the continental shelf area in the northwest Atlantic Ocean (with input from the Navy and subject matter experts) and determined that designating the entire eastern seaboard out to the 200-m (656-ft) isobath did not meet the criteria for a single OBIA. However, several scientifically-supported areas over the continental shelf met the criteria for an OBIA."); SEIS 4-85 (listing OBIAs in the 200-m isobath), 4-86 (same), 4-92 (same), 4-93 (same). The SEIS recognized that the North Atlantic right whale migrates along the continental shelf, which is within the previously designated OBIA. See SEIS 3-41 ("North Atlantic right whales are found in temperate to subpolar waters of the North Atlantic Ocean (Jefferson et al., 2008). They are most commonly found around coastal and continental shelf waters of the western North Atlantic from Florida to Nova Scotia (Kenney, 2009). From late fall to early spring, right whales breed and give birth in temperate shallow areas, and then migrate into higher latitudes where they feed in coastal waters during the late spring and summer. Right whales have been known to occasionally move offshore into deep water, presumably for feeding (Mate et al., 1997). North Atlantic right whales calve between the northeast coast of Florida and southeastern Georgia and forage in the Bay of Fundy (IFAW, 2001; Vanderlaan et al., 2003)."), C-42 ("Northern right whales are currently found in the northwest Atlantic Ocean and the North Pacific Ocean. In the North Atlantic, they range from the Bay of Fundy area during the summer foraging season. They migrate along the coast and their breeding area is in the shallow waters offshore of Florida and Georgia. It is believed that a portion of the population migrates to an undiscovered location.").

NMFS reviewed this OBIA under the new criteria and determined that, while the entire area did not qualify, four more narrowly defined areas did, each of which was designated as an OBIA. See SEIS 4-92 to 4-93 (listing OBIAs and stating: "the entire eastern seaboard out to the 200-m isobath did not meet the criteria, but . . . certain more defined areas did."), 7-44 to 7-45 ("These include the North Atlantic right whale NE and SE critical habitat areas, which are included as OBIAs (OBIAs 3 and 4) and areas of seasonal high marine mammal densities identified as AIAs [Areas of Increased Awareness] such as the Gulf of Maine, Great South Channel, Georges Bank, and the Roseway Basin, which have been included as OBIAs (OBIAs 1, 2, and 3)."); see also SEIS 7-48

to 7-49 ("The commenter notes the existence of 'the North Atlantic right whale migration corridor' in waters <200 meters in depth off the U.S. Atlantic coast. The available sighting data, collected over several decades, are insufficient to represent a specific rational corridor for the North Atlantic right whale off the U.S. Atlantic coast or elsewhere in the North Atlantic Ocean (Kenney, 2012). The winter locations and movements of much of the North Atlantic right whale population are currently unknown."); AR E-63 (same in Final Rule). The SMEs did not recommend that the entire eastern seaboard be designated as an OBIA. AR F2243-48 (stating the criteria used to designate OBIAs), 2275-82 (recommending OBIA for Georges Bank).

Plaintiffs note that the selection criteria for OBIAs in the 2002 and 2007 Final Rules were more restrictive than in the 2012 Final Rule. 67 Fed. Reg. 46712, 46787 (summarizing 2002 criteria for OBIAs); 72 Fed. Reg. 46846, 46869, 46892 (summarizing 2007 criteria for OBIAs); SEIS 7-24 ("The biological criteria established for this 2012 OBIA] process were less restrictive than was the case for the previous OBIA designation processes used for the 2001 FOEIS/EIS, 2007 FSEIS, 2002 Rule, and 2007 Rule, making it more likely that a potential OBIA would be considered/designated," because a potential OBIA area need only be a migratory route or an area of high density, not both). Thus, Plaintiffs argue that Defendants have not provided a reasoned analysis for why the assessment of decades of whale sightings changed so drastically that Defendants could draw the "exact opposite conclusion than it did in previous rules." Pls.' Reply at 6. However, it appears that Defendants instead refined the approach and targeted only the areas of the isobath that would qualify as an OBIA. Plaintiffs point out that in 2008, NMFS reviewed twenty-eight years of sighting data and concluded that 90 percent of sightings occurred within 30 nm of the coast, on the continental shelf. 73 Fed. Reg. 60173, 60178 (Oct. 10, 2008) ("An analysis of sightings data from 1972 through 2000 from the South Carolina/Georgia border to Connecticut (n = 290) indicated that approximately 83 percent of all right whale sightings occurred within 20 nm (37 km) of the coast, and approximately 90 percent of all right whale sightings occurred within 30 nm (55.6 km) of the coast."). However, this evidence does not purport to identify the entire eastern seaboard out to the 200-meter isobath as a known/defined right whale migration route. Defendants point to recent expert evidence that sighting data do not support the 200-meter isobath as a specific migration corridor. Docket No. 37-1

(email response from marine scientist Dr. Kenney agreeing with the following statement: "The commenters note the existence of 'the North Atlantic right whale migration corridor' in waters <200 meters off the U.S. Atlantic coast. The available sighting data, collected over several decades, are insufficient to represent a specific migrational corridor for the North Atlantic right whale off the U.S. Atlantic coast or elsewhere in the North Atlantic Ocean (Kenney, 2012 personal communication). The winter locations and movements of much of the North Atlantic right whale population are currently unknown (Waring et al., 2010).").

Based on the evidence in the record, Defendants reasonably concluded that the four new OBIAs encompassed all right whale critical habitat. Thus, Defendants did not act arbitrarily and capriciously in reaching that conclusion.

b. California sanctuaries

Plaintiffs argue that Defendants improperly downgraded the protections offered to the Monterey Bay, Gulf of the Farallones and Cordell Bank National Marine Sanctuaries from year-round protections (67 Fed. Reg. at 46787; 72 Fed. Reg. at 46892) to seasonal protections (50 C.F.R. § 218.234(f)(2)(x) (noting protection from June through November); see also AR NAV12055-56 (memo from NOAA stating that there are marine mammals in these areas year-round). The record, however, supports the prescribed seasonal restrictions for these marine sanctuaries, as recommended by the regional experts, because the low-frequency species of particular concern use the OBIAs for feeding during those times. AR F-1490, 1510-12 (stating in NMFS's initial screening document for OBIAs for example: "Blue and humpback whale feeding in this area is largely limited to June-November."); SEIS 4-87 (noting seasonal restriction), D-309 to D-310 (summarizing seasonal considerations). Defendants did not act arbitrarily and capriciously in reaching their conclusion. Plaintiffs believe that Defendants improperly referred to the baleen whale as the "low-frequency species of concern." Plaintiffs argue that the concerns about the baleen whale were not articulated during the rulemaking process, yet baleen whales include blue whales, humpback whales, gray whales and right whales, all of which were at issue during the rulemaking process.

iii. OBIAs in the 12 nm zone

NMFS rejected more than 200 potential OBIAs on the grounds that they were located

within the 12-nm coastal exclusion zone, and thus were protected by that zone. See SEIS App. F at p 37-41 (listing potential OBIAs that are within 22 km (12 nm) of the coastline). Plaintiffs, however, argue that several of the rejected OBIAs do not fall within the 12-nm zone, and that there are other rejected areas that extend up to the 12-nm limit for which NMFS refused to consider adequate buffer zones. With respect to the buffer zones, Plaintiffs argue that some of the MPAs extend right up to the 12 nm boundary line, and because there is no buffer zone seaward of the 12 nm limit, those coastal MPAs received less protection than off-shore OBIAs, which are protected by a 1 km buffer zone. See 77 Fed. Reg. at 50309 (rejecting recommendation that NMFS identify important near-coastal habitat in order to "establish meaningful buffer zones for these areas."). NMFS disclosed to the public in the August 2011 draft SEIS and January 2012 proposed rule its findings regarding potential OBIAs that fell within the 12 nm boundary area or extended partially beyond the area but were found not to be biologically important. Plaintiffs objected to specific areas during the comment period, and NMFS responded to those comments. See AR D-40-41 (NRDC's comments on Final Rule: "Additionally, the agency incorrectly assumes that certain established or proposed MPAs and recommended OBIAs are located entirely within 12 nm of shore. For example, the Papahanaumokuakea Marine National Monument was apparently excluded early in the OBIA process on the assumption that it does not extend seaward of that distance, which is incorrect."); AR E-63 (responding to comment by NRDC that the agency incorrectly assumed that certain proposed OBIAs were located entirely within 12 nm of shore); SEIS 7-41 to 7-43 (citing NRDC comments: "The agencies have improperly rejected numerous areas on the grounds that they occur entirely within the Navy's 12nm coastal exclusion zone."); see also Defs.' Mot. at n.4.

Plaintiffs rely on the declarations from Erich Hoyt, senior research fellow for Whale and Dolphin Conservation and co-director of the Far East Russia Orca Project, to argue that rejection of OBIAs as being within or close to the 12 nm boundary line was arbitrary and capricious. Hoyt stated that based on his review of the MPAs that were excluded from OBIA designation based on their proximity to the coastline, thirty-six MPAs extended up to the 12 nm boundary. Hoyt Decl. ¶ 12. Of those thirty-six MPAs, twenty-one extended beyond the 12 nm boundary. Hoyt Decl. ¶ 12. In addition, another fifteen of the MPAs that were improperly excluded as being wholly within the

12 nm boundary come directly into contact with the 12 nm boundary line. Hoyt Decl. ¶ 12. For example, based on his comparison of the coordinates of the MPAs and the GIS-generated map of the world's coastlines, the Great Sandy Marine Park in Australia, which is an important habitat for humpback whales and various dolphins, extends beyond the 12 nm boundary line. Hoyt Decl. ¶ 13 (citing fourteen more examples of MPAs that are important habitat for baleen whales and other marine mammals that are sensitive to low frequency sound, that extend beyond the 12 nm coastal zone: (1) Chagos Island Marine Protected Area in the UK; (2) Mayotte Marine Park in the Indian Ocean; (3) Primeiras and Segundas Reserve off Mozambique; (4) Berau Marine Protected Area in Indonesia; (5) Cendrawash Bay Marine National Park in Indonesia; (6) Coringa-Herald and Lihou Reef National Nature Reserve in Australia; (7) Pacific Remote Islands Marine National Monument; (8) Iroise Marine Nature Park in France; (9) Islas Marias National Biosphere Reserve in Mexico; (10) Laje de Santos Marine Park in Brazil; (11) Grand Manan Basin Right Whale Conservation Area in Canada; (12) Paracas National Reserve in Peru; (13) Corales del Rosario and San Bernardo National Natural Park in Columbia; and (14) Grays Reef National Marine Sanctuary and Biosphere Reserve in the United States); but see also Supp. Hoyt Decl. ¶ 33 (stating that the Laje de Santos Marine Park and the Corales del Rosario and San Bernardo National Nature Park are entirely within the 12 nm coastal zone).

In response to the Hoyt declarations, Defendants' witness Jeannine Cody, Fishery Biologist for NMFS, Office of Protected Resources, Conservation and Permits Division, explained how she determined whether the MPAs should be categorized as OBIAs. For development of the Draft SEIS, Cody used Hoyt's 2005 book regarding MPAs along with other sources as the starting point for gathering the names and locations of cetacean MPAs around the world. Cody Decl. ¶ 5. According to Cody, Hoyt's 2005 book did not contain sufficient information to produce a precise representation of the boundaries of many MPAs. Cody Decl. ¶ 5. To obtain more information about boundaries, Cody used the International Union for Conservation of Nature 2009 World Database on Protected Areas Annual Release dataset. Cody Decl. ¶ 6. The dataset contained boundary information based on latitude/longitude coordinates for many of the MPAs identified in Hoyt's 2005 book. Cody Decl. ¶ 6. Using the dataset, Cody displayed MPA boundaries identified by Hoyt in his 2005 book on

Google Earth's 3-D globe, which allows overlays of spatial information and provides access to high- and low- resolution satellite imagery. Cody Decl. ¶ 6. Cody then used a measuring tool from Google Earth to determine whether any part of the MPA boundary extended beyond 12 nm from the nearest coastline. Cody Decl. ¶ 6. When boundary information for an MPA was not available in the dataset, Cody used alternative approaches to determine whether the MPA extended beyond the 12 nm coastal standoff zone. Cody Decl. ¶ 6. At the end of this process, Cody found that 353 of the 403 MPAs identified by using Hoyt's 2005 book and other sources were ineligible as OBIAs because they either fell entirely within the 12 nm coastal zone or although they extended partially beyond the zone, Cody was unable to locate any information indicating that any part of the area outside the coastal zone met at least one of the biological criteria to establish biological importance. Cody Decl. ¶ 7. In the draft SEIS, MPAs that were deemed ineligible because even though they extended beyond the 12 nm zone, there was no information about biological importance, were footnoted with the explanation that: "Although there are data to support that this general area meets Criterion 2 [i.e., biological criteria], the preliminary analysis did not include any information that indicates that any part of the biologically important area falls outside of the Navy's 12 nm standoff zone." Cody Decl. ¶ 8; see, e.g., NAV5919 (2011 Draft SEIS finding that two potential OBIAs did not qualify because they were not outside the 12 nm zone); NAV11413 (2012 Final SEIS stating same). The biological criteria include: (1) high densities of marine mammals; (2) known/defined breeding/calving grounds, foraging grounds or migration routes; or (3) small, distinct populations of marine mammals with limited distributions. AR E-56.

Prior to the publication of the Final Rule, Cody conducted analysis of additional MPAs for cetaceans that were included in Hoyt's 2011 book, which was released after work on the draft SEIS was substantially complete. Cody Decl. ¶ 9. Using the same methods described above, Cody determined that 345 of the MPAs identified in Hoyt's 2011 book were ineligible for OBIA consideration because they were either entirely within the 12 nm coastal standoff zone or if they extended beyond the zone, there was no information that the area outside the zone was biologically important. Cody Decl. ¶ 11. In response to Hoyt's declaration regarding MPAs that were rejected even though they are wholly within the 12 nm boundary, Cody also stated that boundary information

was available for seven of the fifteen areas identified by Hoyt as being within the 12 nm boundary, but that for another seven areas, boundary data was unavailable but Cody used alternative methods to find the boundaries. Cody Decl. ¶ 12. The last area, Gray's Reef National Marine Sanctuary and Biosphere Reserve, was reexamined by Cody and found not to qualify as an OBIA. Cody Decl. ¶ 34.

There were, however, shortcomings in Cody's analysis. For example, the Great Sandy Marine Park in Australia contains Hervey Bay, the only whale management area designated by the Australian government. Cody Decl. ¶ 23. According to Cody, boundary information for the Great Sandy Marine Park was not available in the dataset, so she used boundaries for Hervey Bay to determine whether any part of the Hervey Bay MPA was outside of the 12 nm coastal standoff zone. Cody Decl. ¶ 23. Cody inadvertently failed to mark the Hervey Bay MPA in the draft SEIS as an area that falls outside the 12 nm zone, but stated in her declaration that she determined during development of the draft SEIS that a small portion of the Hervey Bay MPA extended beyond the 12 nm coastal zone. Cody Decl. ¶ 24. Hoyt stated that boundary information for the Great Sandy Marine Park were given in Hoyt's 2011 book and precise information was available. Supp. Hoyt Decl. ¶ 15.

Cody also substituted smaller MPA areas for those stated in Hoyt's research, which caused her to unreasonably underestimate the size of the MPA. For example, Cody stated that there was no boundary information for the Chagos Island MPA, so she used boundary data from Google Earth for the Danger, Cow, Three Brothers, Resurgent and Nelson Islands, and Peros Banhos Atoll MPAs as surrogates as those MPAs fell within the larger Chagos Island MPA. Cody Decl. ¶ 26. Cody concluded that these MPAs fell within the 12 nm coastal zone, and because the area had not been surveyed, the available data did not indicate that any portions of the Chagos Island MPA fell outside the zone. Cody Decl. ¶ 26. In his supplemental declaration, Hoyt notes that his treatise did have boundary information for the Chagos Islands MPA. Supp. Hoyt Decl. ¶ 19 (the Chagos Island MPA has a total area of 246,357 square miles, and encompasses the entire marine EEZ except for 3 nm around Diego Garcia); Ex. AA-1 at 279.

Hoyt cited eight MPAs that extend right up to the 12 nm boundary based on a comparison

of GIS mapping of MPA coordinates with the 12 nm boundary line, and are habitat for baleen whales or other low frequency sensitive species. Hoyt Decl. ¶ 14 (the eight MPAs are: (1) Ningaloo Marine Park in Australia; (2) Bunaken National Marine Park in Indonesia; (3) Guanacaste Conservation Area in Costa Rica; (4) Dakhla National Park in Morocco; (5) Conkouati-Douli National Park in the Republic of the Congo; (6) Delta du Saloum National Park and Biosphere Reserve in Senegal; (7) Portland Bight Protected Area in Jamaica; and (8) Tortuguero National Park in Costa Rica). In addition, Hoyt stated that several "iconic" MPAs extend beyond the 12 nm boundary line and are therefore not protected: (1) the Papahanaumokuakea Marine National Monument, an area more than 100,000 square nautical miles in size, encircling the northwestern Hawaiian islands; (2) the Canary Islands exclusion zone in Spain, which prohibits naval mid-frequency sonar training within 50 nautical miles of the islands for the protection of beaked whales; and (3) the Galapagos Marine Resources Reserve and Whale Sanctuary in Ecuador, which runs 40 nautical miles from the external borders of the islands. Hoyt Decl. ¶ 15.

Hoyt also opined that the 12 nm boundary line is insufficient. He stated that even for the MPAs wholly within the 12 nm coastal zone, the Navy would be permitted to ensonify these areas to the point where the risk of biologically significant effects in cetaceans remained very high. Hoyt Decl. ¶ 16. In particular, according to Hoyt, NMFS stated that the range at which half the marine mammals exposed to LFA transmissions would experience biologically significant impacts can extend from 13.5 to 35 nm from the source. Hoyt Decl. ¶ 16; 72 Fed. Reg. at 46850. Therefore, the 12 nm coastal exclusion zone "would not provide adequate protection for MPAs occurring closer to shore, such as the near-coastal portions of U.S. Marine Sanctuaries. Hoyt Decl. ¶ 16. Hoyt argued that this required the establishment of a substantial buffer zone, beyond the 1.1 nm that NMFS has prescribed. Hoyt Decl. ¶ 16.

Defendants counter that areas within the 12 nm zone are afforded year-round protection, whether biologically warranted or not, whereas most of the OBIA restrictions are in effect seasonally during times of biological importance. AR E-74 to E-77. Thus, even if a portion of an MPA falls within one km of the 12 nm boundary, the remainder is afforded a year-round buffer in excess of 1 km. Id. Defendants argue that because Plaintiffs have not shown that any coastal MPA

approaching the 12 nm boundary qualifies for OBIA designation, they have failed to show that Defendants arbitrarily afford OBIA-eligible coastal MPAs less protection than OBIAs outside the 12 nm zone. Further, with respect to Hoyt's "iconic" MPAs, the record shows that Defendants examined those areas and determined that they did not satisfy the OBIA designation criteria. See, e.g., SEIS at 4-78 (table showing that the Canary Islands Cetacean Marine Sanctuary contains a high density of marine mammals, but does not satisfy the other criteria); 7-41 ("The Navy and NMFS concur that the Papahanaumokuakea (Northwestern Hawaiian Islands) Marine National Monument (MNM) boundaries do extend seaward of the 22-km (12-nmi) standoff. Under Presidential Proclamation 8031 of 15 June 2006, Establishment of the Northwestern Hawaiian Islands Marine National Monument, the prohibitions required by this proclamation do not apply to Armed Forces activities and exercises, provided that these activities are carried out in a manner that avoids, to the extent practicable and consistent with operational requirements, adverse impacts on monument resources and qualities. Marine animals present in the operational MNM area are more than adequately protected by the Navy's three-part mitigation monitoring (visual, passive acoustic, and active acoustic), delay/shutdown protocols for LFA transmissions, and geographic restrictions."); 7-47 ("Papahanaumokuakea Marine National Monument (formally Northwestern Hawaiian Islands Marine National Monument)-The monument consists of emergent and submerged lands and waters and is the habitat for the endangered Hawaiian monk seal, which is not an LF-hearing specialist. For this reason, the area did not qualify as an LFA MM OBIA."); 7-46 to 7-47 ("The Galapagos Marine Resources Reserve (MRR) was analyzed with emphasis on the areas around Bartolome and Espanola Islands. Even though blue whales are reported to be present, there is no scientific evidence that these whales occur in these waters in densities higher than any other similar location. Therefore, this area was not recommended as an LFA MM OBIA."); see also SEIS D-55-56; D-154; D-91; D-228. On balance, Defendants did not act arbitrarily or capriciously.

iv. Population density models

Plaintiffs argue that Defendants' failure to use verified population density models to identify OBIAs was arbitrary and capricious in light of NMFS' duties under the MMPA to identify mitigation measures that would result in the least practicable adverse impact for marine mammals

and to use the best available science in doing so. See 16 U.S.C. § 1371(a)(5)(i)(II)(aa); 50 C.F.R. §§ 216.102(a), 215.105(c). In particular, Plaintiffs argue that Defendants failed to use the Barlow model, which was produced by west coast regional scientists. See AR NAV15421-649 (2009 article: Predictive Modeling of Cetacean Densities in the Eastern Pacific Ocean setting forth the Barlow method for predictive modeling of cetacean densities). Scientists prepared the Barlow model with the Navy and other users of the marine environment in mind to be used in environmental impact statements. See AR NAV15439. The model provides density maps for more than a dozen marine mammal species, including sperm whales, blue whales, fin whales, and humpback whales, across an area that extends several hundred miles seaward from California through Washington and from the Mexico border to South American and west to Hawaii. See AR NAV15439, 15448, 15556-59, 15623. Plaintiffs state that Defendants used the Barlow model to establish that one recommended OBIA, the Southern California Bight, met the biological criteria for designation as an OBIA as a concentrated area for blue whales, although the OBIA was eventually rejected by the Navy as impracticable. See SEIS 4-80 (analyzing the SoCal Bight area and concluding that it is not practicable to designate as an OBIA); 77 Fed. Reg. at 50301 ("For example, we considered habitat-based density modeling from Barlow et al. (2009) in determining whether an area within the Southern California Bight, including Tanner and Cortes Banks, met our OBIA criteria as an area of blue whale concentration.").

There is no specific statutory requirement that Defendants employ predictive models to map marine mammal densities. See Wash. Crab Producers v. Mosbacher, 924 F.2d 1438, 1448-49 (9th Cir. 1990) (rejecting claim (not in an MMPA case) that agency violated best available data standard by failing to use a specific computer model because there was no requirement that the agency do so). In any event, Defendants also point out that they did not ignore the Barlow model. See AR E58 (Final Rule stating: "For example, we considered habitat based density modeling from Barlow et al. (2009) in determining whether an area within the Southern California Bight, including Tanner and Cortes Banks, met our OBIA criteria as an area of blue whale concentration."), SEIS 7-14 ("An area within the Southern California Bight, specifically an area including Tanner and Cortes Banks (see SEIS/SOEIS Subchapter 4.5.2.3 for boundary information) from June through

November, met the criteria as a concentrated area for blue whales based on predictive modeling (Barlow et al., 2009) or as a foraging area based on a 2000-2004 study of blue whale calls (Oleson, et al., 2007)."); D-315 ("The Southern California Bight is a high-density feeding area for a wide variety of cetacean species. The most abundant species is the short-beaked common dolphin, Delphinus de/phis. The boundaries of this area are taken approximately as the area where D. de/phis density is estimated to be over 1 animal per km-2 (Barlow et al. 2009). High density areas for other species listed above fall within this zone."). Defendants also note that Barlow and co-author Ferguson participated in the process as SMEs (see SEIS D-100), and that NMFS invited all SMEs to use predictive modeling in developing OBIA recommendations. See AR F1127-28 ("NMFS anticipates that the Experts will use peer reviewed literature, technical reports, or his/her own specific expertise and professional experience, along with other data sources to justify their additions, modifications, or deletions to the list of preliminary OBIA Nominees."), SEIS D-3 (same). The SMEs who authored the Barlow study indicated that they would use existing modeling results as appropriate, prepared OBIA recommendations in the areas covered by the Barlow study and cited the study in support of one of their recommendations. See AR F1295 (NOAA email regarding OBIA process: "As it turns out, following the introductory phone call, the 2 experts with specific modeling expertise believed that the best use of models for this exercise was to utilize work that had already been done to support their recommendations, for instance, Jay Barlow has done some modeling that he thought would help him make some recommendations related to high density areas for dolphins off the west coast."), F1510-22 (red line version of NMFS' Initial Screening Analysis for OBIAs citing Barlow method and other models).

Plaintiffs further argue that even when SME Ferguson recommended an OBIA for an area with "particularly high population density" of fin and sperm whales based on density models and line-transect analysis, NMFS arbitrarily rejected it. AR F1517 (recommending OBIA in the Southern Gulf of Mexico for sperm and fin whales, among others); SEIS D-313 (stating that Southern Gulf of Mexico not eligible as OBIA); AR E-74to E-77 (list of OBIAs). Defendants argue that they did not arbitrarily reject an OBIA recommendation from Ferguson because the proposed OBIA was discussed in the administrative process. AR F13723 (2013 NMFS OBIA analysis and

conclusion that Southern Gulf of Mexico not eligible for OBIA), SEIS D-313 to D-314 (analysis of the Southern Gulf of Mexico OBIA). Defendants also point out that Plaintiffs have not established that the Barlow model or any other unidentified density model undermines NMFS's findings regarding any particular OBIA candidate, so there has been no showing that the models were the best available science. See Ecology Ctr. v. Castaneda, 574 F.3d 652, 659-60 (9th Cir. 2009) ("Moreover, WildWest has not cited any scientific studies that indicate the Forest Service's analysis is outdated or flawed.").

Plaintiffs argue that Defendants have used the Barlow model and other density models in regulatory compliance for other Navy training. See AR NAV15444 (Barlow density model paper stating that the Navy has used density modeling), F4896 (NOAA email noting that the Barlow data was incorporated into the St. Andrews database). However, the St. Andrews database did not produce estimates accurate enough to support OBIAs. See AR E-60 (Final Rule noting that: "Density estimates are necessary for the Navy to estimate take. The St. Andrews estimates serve as the least preferred option for calculating take for the Navy's mid-frequency active sonar training activities. However, for the reasons noted above, this method for estimating density does not produce estimates that are considered robust or accurate enough to support the designation of OBIAs under our criteria and requirements."). Further, Defendants observe that the Federal Register describes habitat modeling the Navy uses to estimate take, which utilizes uniform density and this is not used to identify particular areas of relative high density that might qualify as OBIAs. 74 Fed. Reg. 4844, 4871. Here, Defendants did not refuse to utilize density models, and on balance, Defendants did not act arbitrarily and capriciously on this issue.

v. Sperm whale OBIAs

Plaintiffs argue that the failure to identify any OBIAs for sperm whales was arbitrary and capricious, especially in light of NMFS's acknowledgment that "based on vocalizations, anatomy, and other information, sperm whales are likely to be more sensitive in the LFA sonar frequency range than other ondotocetes [non-baleen whales] and therefore the distance at which they would hear and potentially respond to the source is likely more similar to [baleen whales]." 77 Fed. Reg. at 50309; see also AR F15629 (NOAA email that the agency should "*consider* designating OBIAs for

sperm whales if, through the adaptive management process, areas that meet the OBIA criteria are identified.") (emphasis in original). The Final Rule did not designate any sperm whale OBIAs because the agency had "not identified any areas that me[t] the OBIA criteria based solely on sperm whales," but stated that "should supporting evidence become available," it will consider designating OBIAs for sperm whales . . . through the adaptive management process." 77 Fed. Reg. at 50309; AR F15629 ("We are comfortable deferring this decision to when and if an area that meets the OBIA criteria for sperm whales is identified. . . ."). Plaintiffs, however, note that NMFS received expert recommendations for numerous OBIAs designed to protect sperm whales. See SEIS D230, D238, D240, D244, D249, D250, D254, D259, D290, D300, D306, D313. Plaintiffs argue that these recommendations were eliminated when NMFS decided to limit OBIA protection to baleen whales, even though the vast majority of the recommended sperm whale OBIAs were eligible for designation.

Defendants agree that sperm whales, which are mid-frequency specialists, are likely to also be sensitive to low-frequency sounds. See AR E-66 (Final Rule stating: "Based on vocalizations, anatomy, and other information, sperm whales are likely to be more sensitive in the LFA sonar frequency range than other odontocetes and therefore the distance at which they would hear and potentially respond to the source is likely more similar to mysticetes. Accordingly, we will consider the designation of OBIAs for that species, should supporting information become available."); F-13737 (email from NOAA scientist: "After reading NRDC's comments and discussing several issues with Dr. Brandon Southall, we decided that it would be appropriate to revisit the consideration of proposed OBIAs that include important habitat for sperm whales, beaked whales, or harbor porpoises, which were excluded from consideration prior to the proposed rule because of the hearing sensitivity of these species. The reason for reconsidering sperm whale OBIAs is because of their communication, and likely hearing sensitivity, in lower frequencies than other odontocetes and the reason for revisiting beaked whale and harbor porpoise proposed OBIAs is because of their acknowledged general sensitivity to sound at lower levels than other species."). NMFS thus conducted a review of previously-eliminated OBIA candidates to determine whether any OBIAs should be designated specifically for the protection of sperm whales, but found that none met the

eligibility requirements. See AR F-13683-87 (NOAA reconsideration of OBIAs for sperm whales, among other mammals), 13736-37, 13745-90 (2012 NMFS recommended OBIAs for sperm whales, becked whales and harbor porpoises), 15629 (NOAA email: "Regarding the sperm whale issue, we deferred the issue in our previous conversations because the OBIA process did not identify any well-justified recommended OBIAs specifically for sperm whales that we would need to consider adding right now.").

Of the OBIAs referenced by Plaintiffs, Defendants point out that two of them did not meet the eligibility criteria for sperm or baleen whales. See SEIS D-284 (Continental Slope of the Northern Gulf of Mexico), D-252 (Area around Ischia Island and Regno di Nettuno Marine Protected Area). (Although Defendants cited D-252, that area was not targeted for whales, and instead was for the common dolphin). Three of the remaining areas had already been designated as OBIAs with seasonal restrictions for other species that provided de facto protection for sperm whales. See SEIS 4-89 (Ligurian-Corsican-Provencal Basin and Western Pelagos Sanctuary), 7-46 (same), D-250 (same), SEIS D-290 (Coastal Waters of Gabon, Congo and Equatorial Guinea), SEIS 4-87 (same), D-300 (Coastal Waters off Madagascar) SEIS 4-88 (same). After evaluating the remaining nine areas raised by Plaintiffs, the agency found that they did not meet the eligibility criteria for sperm whales.

Plaintiffs argue that the agency did not adequately reevaluate the proposed sperm whale OBIAs, but instead found that there was no new evidence to support OBIAs. See AR F13685-86 (no new evidence to support OBIA). Plaintiffs contend that this explanation is an improper after-the-fact rationalization because there is nothing the record to show that the agency assessed whether seasonal restrictions were sufficient to protect the sperm whale population. See SEIS 4-89. However, an agency need not address every argument that might be raised in litigation. See Forest Guardians v. US Forest Serv., 329 F.3d 1089, 1099-1100 (9th Cir. 2003) ("An agency's actions need not be perfect; we may only set aside decisions that have no basis in fact, and not those with which we disagree. Thus, even if we were to conclude that the Service could develop a better system of predicting wild ungulate use, or even preventing overgrazing, we are not permitted to substitute our judgment for the agency's.") (internal citation omitted). Defendants' conclusion that the mitigation

as a whole, including seasonal OBIAs, satisfied the least practicable adverse impact standard was not arbitrary and capricious.

vi. Non-low-frequency specialists

Plaintiffs raise the issue of whether Defendants' decision to eliminate OBIA protections for harbor porpoises and beaked whales was arbitrary and capricious. Plaintiffs note that Defendants initially recommended OBIAs for harbor porpoises and beaked whales (see AR F15339), but then removed those protections. See SEIS 4-84 (noting that not all prior OBIAs would necessarily be designated as OBIAs in the 2012 Final Rule). Plaintiffs argue that Defendants' explanation that the species' " potential response [to LFA] would not support operational limitations across large OBIA areas," AR E-66, does not comport with the MMPA's protective standard.

Defendants, however, relied on evidence that the frequency of SURTASS LFA is well below the range of best hearing sensitivity for harbor porpoises and beaked whales, so they would need to be substantially closer to the source than a baleen whale to respond to LFA; therefore, the monitoring and shutdown requirements provide effective protection against exposures within 2 km of the LFA source. See AR C49 (Proposed Rule: "The LFA sound source is well below the range of best hearing sensitivity for most MF and HF odontocete hearing specialists. This means, for example, for harbor porpoises, that a sound with frequency less than 1kHz needs to be significantly louder (more than 40dB louder) than a sound in their area of best sensitivity (around 100kHz) in order for them to hear it,"), E65 (Final Rule stating: "We and the Navy both acknowledge the evidence showing that beaked whales and harbor porpoises have responded to a variety of sources (but not SURTASS LFA sonar) at lower received levels than other species respond to those same sources. Even if one assumed that beaked whales or harbor porpoises similarly also respond to SURTASS LFA sonar at lower received levels than other taxa, in light of their very decreased sensitivity to this frequency, the distances at which beaked whales and harbor porpoises can hear LFA sonar sounds (and therefore be expected to respond) are still significantly less than those for low frequency hearing specialist species."), F15620 (NOAA email regarding beaked whales and harbor porpoises: "My overall take on this is that the physical ranges that these animals could actually hear and be affected by LFA is quite limited and thus I do not believe it is appropriate to

designate an entire OBIA based exclusively on these species if they would not be for other species."), F15628 (NOAA email: "Even if one assumed that beaked whales or harbor porpoises might respond to SURTASS LFA sonar in the same manner and at the same lower received levels (than other taxa) that they respond to other sound sources of different types and frequencies, because of their very decreased sensitivity to this frequency, the distances at which these species can hear LFA sonar sounds, and further be expected to respond, are still significantly smaller than those for LF species."). Further, Defendants convened a Scientific Advisory Group to evaluate monitoring and research options to increase the understanding of the potential effects of LFA on these species. AR E52 (Final Rule: "Within the first year of the five-year rule, the Navy will convene a Scientific Advisory Group (SAG). Its goal will be to analyze different types of monitoring and research that could increase the understanding of the potential effects of low-frequency active sonar transmissions on beaked whales and/or harbor porpoises."), E-78 (Final Rule: "Following the Scientific Advisory Group's (SAG) submission of findings, and assuming the SAG recommends going forward with beaked whale and/ or harbor porpoise monitoring/research, the Navy will either: (1) Draft a plan of action outlining their strategy for implementing the SAG's recommendations; or (2) Describe in writing why none of the SAG's recommendations are feasible and meet with NMFS to discuss any other potential options."). Defendants' decision on this issue was not arbitrary and capricious.

B. 12 nm coastal exclusion zone

Plaintiffs argue that Defendants arbitrarily and capriciously failed ensure that the LFA had the least practicable impact by neglecting to analyze whether a larger coastal exclusion zone would result in the least practicable adverse impact on marine mammals. Plaintiffs argue that Defendants have improperly failed to consider a larger coastal zone because there is widespread expert opinion that continental shelf waters are likely to be biologically important to marine mammals, even in areas in which there may not be site-specific data to satisfy OPR. AR F2189-93 (SMEs White Paper); SEIS D284 (recommendation for OBIA on Continental Slope of Northern Gulf of Mexico), D343 (recommendation for OBIA on continental shelf of East China Sea); Gutierrez, 2008 WL 360852, at *13 ("On balance, while Plaintiffs have not shown at this stage that they are likely to prevail on this issue, they have raised a serious question on the merits as to whether Defendants

acted arbitrarily and capriciously in not using a dual criteria that included the distance from the shelf break as well as the coast, at least in those parts of coastal areas where Defendants do not need to operate closer to shore, such as chokepoints. This question is rendered more serious because of the insufficient designation of OBIAs, which might otherwise have helped ensure the least practicable impact on particularly important marine mammal habitats in coastal waters more than 12 nm off shore."). Defendants argue that they need not have considered a larger coastal exclusion zone because the OBIA process protected coastal areas that were biologically important. Because Defendants did not act arbitrarily and capriciously with respect to analyzing data-poor areas, they did not arbitrarily and capriciously fail to consider a larger coastal exclusion zone.

2. Negligible impact based on best available scientific evidence

NMFS may issue a take permit only if it finds that the authorized taking will have a "negligible impact" on marine mammal species or stock. See 16 U.S.C. § 1371(a)(5)(A), (D). The negligible impact analysis requires consideration of "effects that are 'reasonably expected' and 'reasonably likely,' but not those effects that are speculative or uncertain." Center for Biological Diversity, 588 F.3d at 710-11. The analysis must be "based on the best scientific evidence available," 50 C.F.R. § 216.102(a), and not "speculation or surmise." Bennett v. Spear, 520 U.S. 154, 176 (1997). "What constitutes the 'best' available science implicates core agency judgment and expertise to which Congress requires the courts to defer." In re Consolidated Salmonid Cases, 791 F. Supp. 2d 802, 821 (E.D. Cal. 2011). A negligible impact finding is arbitrary and capricious under the MMPA "only if the agency[, inter alia,] ... entirely failed to consider an important aspect of the problem...." See Lands Council, 537 F.3d at 987; cf. Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

A. Reliance on Scientific Research Program ("SRP")

The SRP was created in the mid-1990's specifically to assess the potential impacts of LFA on marine mammals that are low-frequency hearing specialists. See AR E70 ("The Navy designed the two-year study to assess the potential impacts of SURTASS LFA sonar on the behavior of low-frequency hearing specialists, those species believed to be at (potentially) greatest risk."), SEIS C-68 to C-74 (analyzing the SRP and stating in general: "In 1997, there was a widespread consensus

that cetacean response to LF sound signals needed to be better defined using controlled experiments. In response, the Navy worked with scientists to develop the LFS SRP. The LFS SRP was designed to supplement the data from previous studies."). NMFS concluded that the results of this study remain valid. See AR E55-56 (citing the SRP in the Final Rule), 68 ("We agree that technologies that produce finer resolution data have advanced since conclusion of the LFA LFS SRP. However, very few active underwater systems/sensors have the benefit of such a directed and extensive research effort as have the LFS SRP. The results of the LFS SRP are still sound."), 70 (citing the SRP); SEIS 1-20 ("There have been no significant changes to the knowledge or understanding of the potential for SURTASS LFA sonar sound to significantly modify biologically important behavior in marine mammals since the FSEIS. Findings from the Navy-funded Low Frequency Sound Scientific Research Program (LFS SRP) did not reveal any significant change in a biologically important behavior in LF marine mammals, and the risk analysis estimated very low risk. The information in Subchapter 1.4.2.2 of the FOEIS/EIS concerning the LFS SRP remains valid, and the contents are incorporated herein by reference."), 1-22 (citing the SRP), 7-54 ("Very few active underwater systems/ sensors have the benefit of such a directed and extensive research effort as the 1997-98 Low Frequency Sound Scientific Research Program (LFS SRP). While it is true that technologies that produce finer resolution data have advanced since the LFS SRP, the results of the LFS SRP remain valid."); Clark Decl. ¶¶ 3-8.

Plaintiffs argue that Defendants arbitrarily and capriciously failed to consider more recent research showing that underwater sound can affect marine mammals in substantial ways not accounted for by the SRP. For example, Plaintiffs observe that new tagging technology with kinematic and acoustic sensors has allowed researchers to document significant noise impacts on baleen whale feeding that the SRP could not detect. See Calambokidis Decl. ¶¶ 5-8. This Behavioral Research Study (BRS), however, involved mid-frequency sonar, not LFA. Id. Further, the data from the BRS that was available at the time of the Final Rule showed only short-term, small-scale responses. See Clark Decl. ¶¶ 5-7. The BRS data did not undermine the SRP, which also found short-term, small-scale responses to LFA. See Ecology Center, 574 F.3d at 659-60 (finding that there was no showing that certain evidence undermined the evidence used by the

agency). However, Plaintiffs observe that the SRP did not account for the responses such as direct loss of foraging and elevated stress that were found in the BRS. Supp. Calambokidis Decl. ¶¶ 6, 13.

Defendants point out that a January 2012 study entitled, Change in Humpback Whale Song Occurrence in Response to an Acoustic Source 200km Away, documented a change in singing behavior by individual humpback whales (see AR D30 ("Therefore, our data provide clear evidence for the reduction of humpback whale song in response to the reception of OAWRS [Ocean Acoustic Waveguide Remote Sensing] pulses. We interpret this decrease as a change in singing behavior by individual whales.")), which was also found by the SRP. See AR G697-98 (statement in the ESA Biological Opinion: "In the LFS SRP LFA sonar playback experiment (Phase II), migrating gray whales avoided exposure to LFA sonar signals (source levels of 170 and 178 dB sound pressure level) when the source was placed in the center of their migration corridor. Responses were similar for the 170- dB sound level LFA sonar stimuli and for the 170-dB sound level 1/3rd-octave, band-limited noise with timing and frequency band similar to the LFA sonar stimulus. However, during the LFA sonar playback experiments, in all cases, whales resumed their normal activities within tens of minutes after the initial exposure to the LFA sonar signal."). The SRP concluded that the behavioral changes in the humpback whales were short-term, and the January 2012 study did not find otherwise. See AR G697-98; SEIS C70-71 ("In summary, the scientific objective of the LFS SRP was to conduct independent field research in the form of controlled experimental tests of how baleen whales responded to SURTASS LFA sonar signals. Taken together, the three phases of the LFS SRP do not support the hypothesis that most baleen whales exposed to Rls near 140 dB re 1 IJPa (rms) (SPL) would exhibit disturbance of behavior and avoid the area. These experiments, which exposed baleen whales to Rls ranging from 120 to about 155 dB re 1 IJPa (rms) (SPL), detected only minor, short-term behavioral responses."). However, the January 2012 study explained that: "due to the differences in behavioral context, location and proximity to the sound source, it is difficult to compare our findings" with a playback experiment using low-frequency active sonar. See AR D31.

Plaintiffs also cite additional studies which did not address SURTASS LFA that they believe Defendants should have considered. Defendants did also rely on studies involving other

types of underwater noise. SEIS 4-33 (study of temporary loss of hearing in harbor porpoises involving a seismic airgun as a stimulus), 4-34 (study of temporary hearing loss in bottlenose dolphin involving mid-frequency sonar), 4-36 (studies of marine mammals involving noise from commercial shipping and other ambient noise). Plaintiffs argue that these additional studies found, among other things, that low-frequency sound can affect marine mammals far beyond the geographic area where the SRP studied impacts. See AR D27-32 (January 2012 study involving the impact of OAWRS low frequency sound pulses on humpback whales far from the source). One of the studies showed silencing in humpback whales 200 km away from a sound source that Dr. Clark described as "essentially the same as a [SURTASS LFA] sound source." AR D64 (email from Clark describing the January 2012 study and stating that the OAWRS is essentially the same as SURTASS LFA and lamenting the fact that this experiment took place in right whale critical habitat without consultation with NOAA). However, none of these other studies are sufficiently contrary or superior to the SRP to show that Defendants acted arbitrarily and capriciously. See N.C. Fisheries Ass'n v. Gutierrez, 518 F. Supp. 2d 62, 85 (D. D.C. 2007) ("As the D.C. Circuit explained in interpreting statutory language analogous to that of National Standard 2, the agency 'must utilize the "best scientific ... data available," not the best scientific data possible.' Absent some indication that superior or contrary data was available and that the agency ignored such information, a challenge to the agency's collection of and reliance on scientific information will fail.") (internal citation omitted).

B. Recent data

Plaintiffs argue that Defendants improperly used basin-wide or pelagic abundance estimates in determining the size of much smaller, genetically isolated marine mammal populations, such as those around Hawaii. For example, the SEIS used a population of 3,215 bottlenose dolphins from Hawaiian waters (see SEIS 4-61 (chart showing estimates of percentage of marine mammal stocks potentially affected for SURTASS LFA sonar)), yet recent data from 2009 and 2011 show that there are four island-associated populations of bottlenose dolphins within the main Hawaiian islands that have stock sizes of 102, 147, 153 and 594. See Baird Decl. ¶ 6 ("With regard to bottlenose dolphins, for example, publications in 2009 and 2011 demonstrated the existence of four island-associated populations within the main Hawaiian islands and presented estimates of the

abundance of marked animals in each population, as well as the proportion of marked animals in the populations, from which total abundance estimates are easily derived."). At least seven other species around Hawaii similarly occur in small, resident populations. Id. ¶¶ 7-8 ("In addition, data from photo-identification, satellite tagging and genetic studies have indicated the existence of small island-associated populations of melon-headed whales, Blainville's beaked whales, Cuvier's beaked whales, short-finned pilot whales, pantropical spotted dolphins, rough-toothed dolphins, and dwarf sperm whales around one or more of the main Hawaiian Islands. For all of these species, it is likely that NMFS will recognize multiple stocks with the Hawaiian EZZ."). Plaintiffs argue that Defendants failed to consider this information even though Plaintiffs raised it during the comment period. AR D54-55 (raising the issue of island-associated small populations of several species, including bottlenose dolphins, melon-headed beaked whales and rough-toothed dolphins).

The Navy's marine mammal take estimates used in the SEIS and the 2012 Final Rule were finalized in March 2011. See AR NAV2442 (email noting that the draft SEIS was ready for review and comment), 2560-61 (Draft SEIS dated April 2011 showing estimates of marine mammal stocks). Prior to that time, NMFS had not divided the stock complex of approximately 3,215 animals into separate stocks. AR NAV5729 (2011 Draft SEIS showing one stock for bottlenose dolphins), 17468 (2009 NOAA U.S. Pacific Marine Mammal Stock Assessments noting the possibility of five island-associated populations, but stating that: "the limited number of bottlenose dolphin groups sampled in these studies preclude any strong inference regarding stock structure within the Hawaiian EEZ at this time."). The Navy calculated the percentage of the stock complex as a whole that could potentially experience a Level B behavioral disturbance, which was below the twelve percent annual cap. See AR NAV5549 (chart of post-operational estimates of marine mammal stocks potentially affected by operation of SURTASS LFA sonar in all mission areas for the second LOA, showing that for 3,215 bottlenose dolphins in Hawaii, the percentage of stock affected from 120 to 180 dB was 1.02% and the percentage of stock affected for more than 180dB was 0%) , 5562-63 (chart showing estimates of percentage of marine mammal stock potentially affected by SURTASS LFA in a certain area, showing that for 3,215 bottlenose dolphin, the percentage affected at less than 180dB was 0.5087% and was 0% at greater than or equal to 180dB with mitigation), 5810 (same); SEIS 4-

61 to 4-62 (same).

Only three months after the Navy finalized its take estimates for the SEIS and the Final Rule, however, and a full year before Defendants published the SEIS and even longer before the Final Rule, NMFS published its 2010 Stock Assessment reflecting the division of the bottlenose dolphin population into five separate stocks. The information in the 2010 Stock Assessment may well have been available to Defendants before the June 2011 publication date. The document shows a revised date of January 5, 2011. Defendants concede that both the SEIS and the Final Rule failed to consider these smaller stocks. See AR I42-43; Defs.' Mot. for Summ. J. at 25.

The Navy only addressed the expected impact on each of the smaller stocks in its take estimates in support of the 2012-13 LOA, which set forth separate estimates for each bottlenose stock within the Hawaiian complex. See AR I42-43 (2012 Navy application for LOA stating that there were five island-associated stocks of bottlenose dolphins), 46 (same), 73-76 (2012 chart showing affected stock, showing five stock for bottlenose dolphin and showing that the percentage of stock affected at 120 to 180 dB was 6.05% and 0.76% for 3,178 animals in the same stock but on two different parts of the Hawaiian Islands; 0.08% for 147 animals in stock; 0.03% for 594 animals in stock; 0.27% for 153 animals in stock; and 2.32% for 102 animals in stock, and at over 180dB, 0% for all stocks). Based on this data, Defendants found that the impact would be negligible.

The LOA process does not replace the public comment process required for the SEIS and Final Rule, nor does it relieve Defendants of the requirement to use the best available data. See Natural Resources Defense Council v. Gutierrez, 2008 WL 360852, at *8 (N.D. Cal. Feb. 6, 2008) ("However, as this Court previously ruled in the earlier case, it is improper for NMFS, the government agency tasked by the MMPA with requiring measures to ensure the least practicable impact on marine mammals when authorizing takes, to shift the burden to members of the public to prove that additional exclusion zones are warranted. See Evans, 279 F. Supp. 2d at 1163."); Natural Resources Defense Council v. Evans, 279 F. Supp. 2d 1129, 1163-64 ("However, the mere prospect that future LOAs will consider additional information on marine mammal distribution and the Navy may choose to avoid sensitive areas does not relieve NMFS of its specific statutory responsibility in the present to 'prescribe regulations setting forth . . . means of effecting the least practicable adverse

impact on such species or stock and its habitat.' 16 U.S.C. § 1371(a)(5)(A)(ii)(I)."). Thus, Defendants failed to use the best available data regarding the bottlenose dolphin stock, even though the 2010 Stock Assessment describing separate stock populations was released well before publication of the SEIS and the Final Rule and within a few months of the finalization of the take estimates for them. Defendants were arbitrary and capricious in failing to use the best available recent data.

II. National Environmental Policy Act

The Court reviews claims of violations of NEPA under the APA to ensure that the agency has not acted in a manner that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." Okanogan Highlands Alliance v. Williams, 236 F.3d 468, 471 (9th Cir. 2000); 5 U.S.C. § 706. "Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." Motor Vehicle Manufacturers Association of the United States, Inc. v. State Farm Mutual Automobile Ins. Co., 463 U.S. 29, 43 (1983). The Court's role is to:

> consider whether the [agency's] decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment. [citations omitted]. Although this inquiry into the facts is to be searching and careful, the ultimate standard of review is a narrow one. The court is not empowered to substitute its judgment for that of the agency. The final inquiry is whether the Secretary's action followed the necessary procedural requirements.

Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402, 416 (1971).

Courts apply a "rule of reason" standard, which assesses "whether an EIS contains a reasonably thorough discussion of the significant aspects of the probable environmental consequences." Churchill County v. Norton, 276 F.3d 1060, 1071 (9th Cir. 2001) (quoting Trout Unlimited v. Morton, 509 F.2d 1276, 1283 (9th Cir. 1974)); see also City of Carmel-by-the-Sea v. U.S. Dep't of Transp., 123 F.3d 1142, 1151 (9th Cir. 1997) ("the National Environmental Policy Act requires a 'reasonably thorough' discussion of the environmental consequences in question, not unanimity of opinion, expert or otherwise.") In making this determination, a court must make a

"'pragmatic judgment whether the EIS's form, content, and preparation foster both informed decision-making and informed public participation.'" Churchill County, 276 F.3d at 1071; City of Carmel, 123 F. 3d at 1150-51. "'Once satisfied that a proposing agency has taken a "hard look" at a decision's environmental consequences, [our] review is at an end.'" City of Carmel, 123 F.3d at 1151 (quoting Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992)). An EIS "provide[s] full and fair discussion of significant environmental impacts and inform[s] decisionmakers and the public of reasonable alternatives which would avoid or minimize adverse impact or enhance the quality of the environment." See 40 C.F.R. §1502.1.

The Navy produced a Record of Decision on its SEIS on August 15, 2012. Plaintiffs argue that Defendants violated NEPA by: (1) failing to consider a reasonable range of alternatives to the proposed deployment of SURTASS LFA and appropriate mitigation measures; (2) relying on outdated data with respect to marine mammals; and (3) failing to take a hard look at LFA's impacts on non-marine mammals.

1. Reasonable alternatives

An EIS must discuss "reasonable alternatives" to the proposed action. See 42 U.S.C. § 4332(2)(C)(iii); City of Carmel, 123 F.3d at 1155. Agencies must "[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." 40 C.F.R. § 1502.14(a). The "rule of reason" guides the choice of alternatives and the extent to which the EIS must discuss each alternative. City of Carmel, 123 F.3d at 1155 (citing Citizens Against Burlington v. Busey, 938 F.2d 190, 195 (D.C. Cir. 1991)). "The [EIS] need not consider an infinite range of alternatives, only reasonable and feasible ones." City of Carmel, 123 F.3d at 1155; see also Laguna Greenbelt, Inc. v. U.S. Dep't of Transportation, 42 F.3d 517, 524 (9th Cir. 1994); Seattle Audobon Society v. Moseley, 80 F.3d 1401, 1404 (9th Cir. 1996); League of Wilderness Defenders v. U.S. Forest Serv., 689 F.3d 1060, 1071 (9th Cir. 2012) ("However, 'the EIS need not consider an infinite range of alternatives, only reasonable or feasible ones.' An agency need not consider alternatives that 'extend beyond those reasonably related to the purposes of the project.'") (internal citations omitted)); 40 C.F.R. § 1502.14(a)-(c). The range of alternatives that is deemed reasonable depends upon "the

underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13; see also City of Carmel, 123 F.3d at 1155 ("The stated goal of a project necessarily dictates the range of reasonable alternatives and an agency cannot define its objectives in unreasonably narrow terms"). A court should uphold "an agency's definition of objectives so long as the objectives that the agency chooses are reasonable, and we uphold its discussion of alternatives so long as the alternatives are reasonable and the agency discusses them in reasonable detail." Citizens Against Burlington, 938 F.2d at 195.

First, Plaintiffs argue that the SEIS failed to examine a reasonable range of alternatives because there were only three alternatives: (1) a no action alternative; (2) an alternative that was the same as the 2007 FSEIS Preferred Alternative; and (3) an alternative that was the same as the 2007 FSEIS Preferred Alternative, but with a new proposed list of OBIAs. See SEIS ES-8 to ES-9. More particularly, Plaintiffs argue that the 2007 Preferred Alternative was flawed for not including a broader set of OBIAs, so including it as an alternative was arbitrary. However, an agency need not consider an "infinite range of alternatives" to satisfy NEPA. League of Wilderness Defenders, 689 F.3d at 1071.

Second, Plaintiffs argue that Defendants' failure to consider alternatives to the 12 nm coastal exclusion zone violated NEPA for the same reasons that they contend it violated the MMPA. See Idaho Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992) ("[t]he existence of a viable but unexamined alternative renders an environmental impact statement inadequate.") (internal citation omitted). Defendants respond that the agency considered additional expanded LFA deployment restriction areas beyond the 12 nm exclusion zone when it considered OBIAs. See SEIS § 4.5.6. The SEIS also considered the appropriateness of maintaining the exclusion zone at 12 nm. See SEIS 4-93. NEPA does not require the agency to include these issues as stand-alone alternatives. See Westlands Water Dist. v. U.S. Dep't of Interior, 376 F.3d 853, 868 (9th Cir. 2004) ("Nor is an agency required to undertake a 'separate analysis of alternatives which are not significantly distinguishable from alternatives actually considered, or which have substantially similar consequences.'") (internal citation omitted).

Here, the SEIS explained that the 2001 FEIS and the 2007 FSEIS considered numerous

alternatives to the proposed deployment of LFA, including acoustic and non-acoustic detection methods, unrestricted LFA operations, monitoring and mitigation for fish, pre-operational surveys, and an extended coastal standoff zone, but found that these methods were either infeasible or failed to meet the purpose and need of the proposed action. See SEIS 2-11, 2-12, 4-105 ("In these documents, numerous potential alternatives have been analyzed including: acoustic and non-acoustic detection methods such as radar, laser, magnetic, infrared, electronic, electric, hydrodynamic, biological technologies, passive sonar and high- or mid-frequency active sonar; monitoring and mitigation for fish; the use of small boats and aircraft for pre-operational surveys; and an extended coastal standoff range of 46 km (25 nmi) vice 22 km (12 nmi). It has been concluded in the FOEIS/EIS (DoN, 2001) and the FSEIS (DoN, 2007a) that none of these potential alternatives met the purpose and need of the proposed action to provide Naval forces with reliable long-range detection and, thus, did not provide adequate reaction time to counter potential threats. Furthermore, they were not considered practical and/or feasible for technical and economic reasons."), 4-106 ("In previous SURTASS LFA sonar NEPA documents, numerous potential alternatives were analyzed including: acoustic and non-acoustic detection methods such as radar, laser, magnetic, infrared, electronic, electric, hydrodynamic, biological technologies, passive sonar and high- or mid-frequency active sonar; unrestricted SURTASS LFA sonar operations; monitoring and mitigation for fish; the use of small boats and aircraft for pre-operational surveys; and an extended coastal standoff range of 46 km (25 nmi) vice 22 km (12 nmi). Non-acoustic alternative ASW detection technologies that were originally presented in Subchapter 1.2.1 of the 2001 FOEIS/EIS (Don, 2001) were reviewed and updated in Subchapter 1.1.4 of this SEIS/SOEIS reaching the same conclusions. It was concluded in the FOEIS/EIS (DoN, 2001) and the FSEIS (DoN, 2007a) that none of these potential alternatives was capable of accomplishing the Navy's purpose and need nor was considered practical and/or feasible for technical and economic reasons."). Thus, Defendants considered these issues in the SEIS.

Finally, Plaintiffs argue that the SEIS's mitigation analysis also violates NEPA because the failure to take a hard look at data-poor regions in the OBIA process also constitutes a failure to consider an important aspect of the problem. See Center for Biological Diversity v. U.S. Bureau of

Land Mgmt., 698 F.3d 1101, 1109 (9th Cir. 2012) ("An agency action is arbitrary and capricious if the agency has: 'relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.'") (internal citation omitted). As described above, however, the issue of data-poor regions was examined extensively in the SEIS, which contains numerous mitigation measures in addition to OBIAs. Defendants have not acted arbitrarily and capriciously on this issue.

2. Data regarding marine mammals

Plaintiffs argue the Navy's analysis of LFA's effects on marine mammals is arbitrary because it relied heavily on the outdated SRP study and uses basin-wide, pelagic population numbers that erroneously subsume small, insular populations of marine mammals. As set forth above, Defendants acted arbitrarily and capriciously in failing to use the best available data when they used the basin-wide pelagic numbers for the bottlenose dolphin rather than the more current smaller stocks. The same conclusion applies here. Defendants acted arbitrarily and capriciously in relying on outdated population information.

3. Data regarding non-marine mammals

Plaintiffs argue that in the administrative process, the Navy committed to analyzing OBIAs for non-mammal marine animals by "taking a 'further hard look' at any areas between 22 km (12 nm) and continental shelf break that may meet LFA non-[marine mammal] OBIA criteria." AR NAV805. Plaintiffs argue, however, that the Navy failed to consider OBIAs in those areas or in any other areas, and arbitrarily mischaracterized the potential impact of LFA on fish and sea turtles as minimal. Compare SEIS 4-71 (LFA impacts to fish and sea turtles will be minimal); 4-71 (noting, for example, that sea turtles would have to be well within the LFA mitigation zone to be affected by the LFA) with SEIS 4-5 to 4-7 (noting that fish can have permanent hearing damage from continuous high intensity sound after at least one hour), 4-25 to 4-26 (LFA may result in temporary deafness, behavioral responses and permanent hearing loss in fish and sea turtles). However, the studies cited by Plaintiffs are inapposite. For example, some studies showing permanent hearing

damage to fish resulted from continuous high intensity sound for one hour, not the shorter bursts of low frequency sonar at issue here. In addition, the SEIS acknowledges temporary injury to fish and sea turtles, which is consistent with a finding that damage was minimal. Further, the SEIS states that the Navy considered whether it was appropriate to establish OBIAs for species other than marine mammals, "assuming those species occur within the same ocean region and during the same time of year as the SURTASS LFA sonar operation and possess some sensory mechanism that allows it to perceive the LF sounds or possess tissue with sufficient acoustic impedance mismatch to be affected by LF sounds (SEIS 4-70), and concluded that most species would be unaffected and therefore, with the exception of ESA-listed fish and sea turtles, the non-marine mammals were eliminated from OBIA consideration. See, e.g., SEIS 4-71 ("Thus, many organisms would be unaffected, even if they were in areas of LF sound, because they do not have an organ or tissue with acoustic impedance different from water. Based on these factors, virtually all other species were eliminated from further consideration except for listed fish and sea turtles.").

A. Fish

Plaintiffs contend that the Navy did not designate any OBIAs for fish and did not analyze any other mitigation measures for fish even though there were comments on the Draft SEIS that supported OBIAs for non-marine mammals such as fish. See AR NAV7154-58 (comment recommending OBIA designation for particular marine currents and seamounts because they support, among other things, important fish population). In particular, Plaintiffs argue that the SEIS describes studies showing that low-intensity sound can cause hearing loss in fish that lasts for more than two weeks, and that high-intensity sound may result in damage to fish's sensory hair cells causing permanent hearing loss. See SEIS 4-7 to 4-8 (discussing temporary hearing loss in fish: "In addition to the possibility of causing permanent injury to fish ear sensory hair cells, underwater sound may cause TTS, a temporary and reversible loss of hearing that may last for minutes to days."); ES-14 (discussing affects on sea turtles, and stating that: "Any masking effects of the sonar would be temporary and not significant."), 4-14 (Navy funded research in 2007 showing hearing loss in fish lasting 24 to 96 hours after exposure to low-frequency sound). Plaintiffs contend that these studies contradict the conclusion in the SEIS that LFA has "minimal impact on at least the species of

fish that have been studied." SEIS 4-20. However, these studies exposed goldfish and fathead minnows, which are hearing specialists, to sustained high-intensity sound levels, up to three weeks at a time in some cases. NAV35475 (2003 study entitled Noise-Induced Stress Response and Hearing Loss in Goldfish), NAV35496 (2006 study entitled Anatomical and Functional Recovery of the Goldfish Ear Following Noise Exposure, noting that the fish were exposed to white noise for 48 hours), NAV38144 (2004 study entitled Effects of Noise Exposure on Click Detection and the Temporal Resolution Ability of the Goldfish Auditory System in which the fish were exposed to white noise for 24 hours). By contrast, LFA signals have an average length of sixty seconds punctuated by no-sound intervals that typically last six to fifteen minutes, so fish would not be subject to sound exposure similar to that in these studies.

Other agencies such as NOAA also expressed concern about the potential impact on fish. See, e.g., AR F9894 (NOAA stated that: "The potential environmental consequences (e.g., increased predation by other species, etc.) of fishes experiencing temporary threshold shifts [hearing loss] for 24 to 96 hours are not addressed. It seems inappropriate to conclude that impacts are minimal if these consequences are unknown."). However, NOAA's statement was made in response to the 2007 FSEIS, in reference to whether potential effects of temporary threshold shifts on fish were known.

Defendants argue that the record shows that the Navy took a hard look at potential LFA impacts to fish. The SEIS cited five recent studies concluding that sound exposure from LFA, mid-frequency active sonar, and seismic airguns resulted in no fish mortality. SEIS 4-3 to 4-24; AR NAV33586 (2007 study entitled The Effects of High-Intensity, Low-Frequency Active Sonar on Rainbow Trout), NAV24296 (2008 study entitled The Effects of Seismic Airgun Noise on the Hearing Sensitivity of Tropical Reef Fishes at Scott Reef, Western Australia), NAV35506 (2007 study entitled The Inner Ears of Northern Canadian Freshwater Fishes Following Exposure to Seismic Airgun Sounds), NAV26172 (2010 study entitled Exposure of Fish to High-Intensity Sonar does not Induce Acute Pathology), NAV24205 2011 study entitled Effects of Mid-Frequency Active Sonar on Hearing in Fish). Two of the studies examined LFA exposure at 193dB and found no damage to either auditory or non-auditory fish tissue. AR NAV33586, NAV26172. Further, the

studies found that any hearing loss was small and recovery fairly rapid. Id. Thus, the SEIS concluded that the 2007 FSEIS's conclusions remained valid and that "no new data contradict any of the assumptions or conclusions" presented therein. SEIS 4-1. Plaintiffs have not shown that Defendants failed to take a hard look at the subject.

B. Sea turtles

Plaintiffs argue that the Navy's rationale for declining to create OBIAs or provide other mitigation for sea turtles runs counter to the evidence in the record. For example, the SEIS states that sea turtles "primarily hear low frequency sounds," and that exposure to low-frequency seismic airguns has caused avoidance, increases in swimming, and erratic behavior. See SEIS 3-29 ("Based on the structure of the inner ear, there is some evidence to suggest that marine turtles primarily hear low frequency sounds, and this hypothesis is supported by the limited amount of physiological data on turtle hearing (e.g., Ketten and Bartol, 2006; Bartol, 2008)."), 4-25 to 4-26 (citing study showing increase in swimming and erratic behavior in sea turtles exposed to seismic airguns). The SEIS, however, explains that the airgun study employed "impulsive signal with a large bandwidth, high energy, and a short duration," unlike LFA transmissions. SEIS 4-26 ("While the aforementioned studies are of some general interest, it is important to note that airguns used in those studies have an impulsive signal with a large bandwidth, high energy, and a short duration. Therefore, airgun signals cannot be directly compared with SURTASS LFA sonar, since the signal characteristics are very different, and the likelihood of effects on living tissue dissimilar as well."). The SEIS reasonably concluded that the airgun exposure could not be directly compared to LFA exposure. SEIS 4-26.

Plaintiffs also argue that there is no support in the record for the SEIS's conclusion that because the "majority of sea turtles encountered would probably be transiting in the open ocean from one site to another, the possibility of significant displacement would be unlikely." SEIS 4-26. However, the SEIS states that sea turtles generally forage, nest and breed in shallow, near-shore continental shelf waters where LFA operations are constrained by the 12 nm coastal standoff zone. See SEIS 4-27. Further, the SEIS concluded that because sea turtles spend "a high percentage of their lives in the upper 100m of the water column, particularly if they are transiting between foraging and nesting grounds in the open ocean," they would not likely encounter LFA

transmissions, which are centered at a nominal depth of 122 m. SEIS ES-14; 4-27.

Plaintiffs argue that the SEIS acknowledges the critically endangered status of several sea turtle species, but did not seriously consider any geographic restrictions or mitigation to protect them. See SEIS 3-22 ("All sea turtles are protected under Appendix I of the Convention on International Trade in Endangered Species of Flora and Fauna (CITES), which prohibits international trade to and from signatory countries. Six of the seven sea turtle species are listed under the ESA as threatened and/or endangered ."). Plaintiffs argue that the Navy should have followed through with its plan to analyze OBIAs for non-mammal species in the areas where the coastal shelf extends beyond 12 nm, because those areas might be important foraging and development ground for sea turtles. AR NAV816 (2010 briefing for Navy regarding SURTASS LFA stating that the Navy will take a further hard look at the non-marine mammal OBIAs/dual coastal standoff areas), SEIS 3-23 (noting that young turtles swim from shore until they reach the open ocean), & n.8, 4-27 (identifying continental shelf as foraging and development grounds for sea turtles); AR F3172-73 (sea turtle density estimate for the U.S. east coast and Gulf of Mexico); AR NAV12054-55 (Office of National Marine Sanctuaries' recommendation for protection of five endangered marine turtle species in Florida Keys). Plaintiffs argue that the monitoring protocol is not sufficient mitigation for sea turtles (SEIS 4-27 to 4-28 (describing the monitoring protocol), 4-71 (same)) because the protocol may not detect some individual or smaller sea turtles, which would increase their exposure to LFA. AR G688 ("Monitoring measures may not detect some individual or smaller sea turtles, which would increase their risk of exposure to sound pressure levels associated with SURTASS LFA sonar within the mitigation zone (that is, 180 dB) if they encountered SURTASS LFA sonar vessels during sonar transmission."). But the SEIS found that the visual and acoustic monitoring systems would reduce the potential of turtles entering the LFA area because the monitoring array is positioned at the top of the LFA vertical array so turtles would have to swim through the sonar detection zone before entering the 180 dB mitigation zone, wherein detection would be "highly likely." SEIS 4-28. Plaintiffs observe that there has only been one reported sighting of a sea turtle between 2003 and 2011, and argue the rare sighting shows that monitoring for sea turtles is ineffective. However, it is unclear whether the very low detection rate stems from

inadequate detection or low presence in the relevant area.

Plaintiffs point out in their reply brief that the Navy ignored the fact that sea turtles are deep divers and can remain submerged for long periods of time, permitting intense LFA exposure as they resurface. SEIS 3-22 ("Marine turtles are capable of making deep, repetitive dives to search for food and can remain submerged for long periods of time, such as when resting on the ocean bottom."), 3-27 ("Olive ridley turtles are capable of deep dives, having been recorded diving to 290 m (951 ft), although routine feeding dives of 80 to 110 m (262 to 361 ft) are most common (Bjorndal, 1997; Lutcavage and Lutz, 1997). Polovina et al., 2003 reported that olive ridley turtles only remained at the surface for 20% of the time, with about 75% of their dives to 100 m and 10% of total dive time spent at depths of 150 m."). Defendants acknowledge that some sea turtles are deep divers, but the shallow water depths where sea turtles are most often located, including during routine diving, are principally above the LFA mitigation zone. SEIS 4-27 ("In shallower continental shelf waters, where most foraging grounds are located, even deep-diving turtles, such as the leatherback, make shallower foraging dives, frequently to less than 60 m (197 ft) due to the constrained water depths (Eckert et al., 1996; Hays et al., 2006). Moreover, turtle foraging grounds do not encompass all available continental shelf waters but are typically in restricted areas of the productive shelf and inshore estuarine waters. Thus, most frequently, sea turtles would occur in the water column above the LFA mitigation zone and, thus, would not encounter LFA received levels 2:180 dB re 1 IJPa (rms), the threshold at which they are conservatively considered to be injured."). Defendants argue that deeper diving turtles that pass through the mitigation zone would be detected using the acoustic monitoring system. SEIS 4-27 to 4-28 ("The position of the HF/M3 sonar system above the top of the LFA sonar array means that a sea turtle would have to swim from the surface through the HF/M3 sonar detection zone to enter into the 180-dB LFA mitigation zone, making an acoustic detection of the animal highly likely."). On balance, Plaintiffs have not shown that the Navy failed to take a hard look at the impacts to sea turtles.

III. Endangered Species Act

The ESA prohibits any person from "taking" species listed as endangered and empowers the United States Fish and Wildlife Service ("FWS") and NMFS to promulgate regulations

prohibiting the taking of any species listed as threatened. 16 U.S.C. §§ 1533, 1538(a)(1)(A)-(B), (G). Actions challenged under the ESA are also reviewed under the "arbitrary and capricious" standard of the APA. See Village of False Pass v. Clark, 733 F.2d 605, 609-10 (9th Cir. 1984). Section 7 of the ESA requires each federal agency, through consultation with NMFS or FWS, to:

> insure that any action authorized, funded, or carried out by [the] agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary [of the Interior or of Commerce] . . . to be critical.

16 U.S.C. § 1536(a)(2).

To ensure compliance with this requirement, the ESA prescribes a three-step consultation process in which the agency with jurisdiction over the species evaluates the nature and extent of jeopardy to the species. Under this process, the Navy first inquires of NMFS whether any threatened or endangered species are present in the area of the proposed action. See Thomas v. Peterson, 753 F.2d 754, 763 (9th Cir. 1985); 16 U.S.C. § 1536(c)(1). Next, if the answer is affirmative, the Navy prepares a biological assessment to determine whether the species is likely to be affected by the action. See Thomas, 753 F.2d at 763; 16 U.S.C. § 1536(c)(1). Third, if NMFS determines, based on the biological assessment, that the action the Navy proposes to take is likely to affect a threatened or endangered species, the two agencies must engage in formal consultation. Id. Alternatively, if NMFS determines that the action the Navy proposed to take would not likely adversely affect a protected species, NMFS could attempt informal consultation. Id.

Formal consultation results in a biological opinion from NMFS which states a conclusion as to whether the proposed action is likely to jeopardize the continued existence of a listed species or result in destruction or adverse modification of critical habitat. 50 C.F.R. § 402.14. If the biological opinion concludes that the proposed action would jeopardize the species or adversely affect critical habitat, then the proposed action may not go forward unless NMFS can suggest an alternative to avoid the adverse impact. Id; 16 U.S.C. § 1536(b)(3)(A). If the biological opinion concludes that the proposed action will not violate the Act, NMFS may still require mitigation measures. See Thomas, 753 F.2d at 763; 16 U.S.C. § 1536(b)(4)(ii)-(iii).

The ESA provides that "each agency shall use the best scientific and commercial data

available." 16 U.S.C. § 1536(a)(2). A biological opinion "may be invalid if it fails to use the best available scientific information as required by 16 U.S.C. § 1536(a)(2) ." Pac. Coast Fed'n of Fishermen's Ass'n, v. Nat'l Marine Fisheries Serv., 265 F.3d 1028, 1034 (9th Cir.2001). To the extent that there is any uncertainty as to what constitutes the best available scientific information, Congress intended "to give the benefit of the doubt to the species." Conner v. Burford, 848 F.2d 1441, 1454 (9th Cir.1988) (quoting H.R. Conf. Rep. No. 96-697, 1st Sess. 12, reprinted in 1979 U.S.C.C.A.N. 2572, 2576). While a reviewing court must show deference to the reasonable decisions of an agency, such deference is "'warranted only when the agency utilizes, rather than ignores, the analysis of its experts.'" Ctr. for Biological Diversity v. Bureau of Land Mgmt, 422 F. Supp. 2d 1115, 1127 (N.D. Cal. 2006) (quoting Ctr. for Biological Diversity v. Lohn, 296 F.Supp.2d 1223, 1239 (W.D.Wash. 2003)).

NMFS issued its "no jeopardy" Biological Opinion for the Final Rule on August 13, 2012. See AR G423. Plaintiffs argue that the opinion violates ESA's requirement to use the best available science for the same reasons that the Final Rule and the SEIS violate MMPA and NEPA. For example, Plaintiffs argue that with respect to marine mammals, NMFS ignored more recent studies in relying on the SRP to analyze LFA's effects on marine mammals (see AR G689, 696-97 (relying primarily on the SRP and related studies)), and failed to account for small, insular marine mammal populations (see AR G677-89 (analyzing all affected species). Plaintiffs also argue that the conclusion in the biological opinion that LFA will not adversely impact ESA-listed sea turtles and fish rests on the same flawed analysis as the SEIS. As set forth above, the Court was not persuaded by the majority of Plaintiffs' arguments on these issues. While Defendants did not use the best available data with respect to the bottlenose dolphin, there is no evidence that the bottlenose dolphin is listed as endangered or threatened under the ESA. Therefore, Defendants did not violate the ESA.

Extra-record evidence

"Judicial review of an agency decision typically focuses on the administrative record in existence at the time of the decision and does not encompass any part of the record that is made initially in the reviewing court." Southwest Center for Biological Diversity v. U.S. Forest Service,

100 F.3d 1443, 1450 (9th Cir. 1996). The Court may only consider extra-record materials: (1) if necessary to determine "whether the agency has considered all relevant factors and has explained its decision," (2) "when the agency has relied on documents not in the record," or (3) "when supplementing the record is necessary to explain technical terms or complex subject matter." Extra-record documents may also be admitted "when plaintiffs make a showing of agency bad faith." Id. These exceptions are narrowly construed. The Lands Council v. Powell, 395 F.3d 1019, 1030 (9th Cir. 2005) ("These limited exceptions operate to identify and plug holes in the administrative record. Though widely accepted, these exceptions are narrowly construed and applied."). Moreover, "consideration of the evidence to determine the correctness or wisdom of the agency's decision is not permitted, even if the court has also examined the administrative record." Arasco, Inc. v. EPA, 616 F.2d 1153, 1160 (9th Cir. 1980) ("If the reviewing court finds it necessary to go outside the administrative record, it should consider evidence relevant to the substantive merits of the agency action only for background information, as in Bunker Hill, or for the limited purposes of ascertaining whether the agency considered all the relevant factors or fully explicated its course of conduct or grounds of decision. If the court determines that the agency's course of inquiry was insufficient or inadequate, it should remand the matter to the agency for further consideration and not compensate for the agency's dereliction by undertaking its own inquiry into the merits.") (internal citation omitted). The relevant factors analysis allows for consideration of extra-record testimony from Plaintiff, as well as from the agency. See Earth Island Institute v. USFS, 442 F.3d 1147, 1161-62 (9th Cir. 2006) (affirming admission of plaintiff's extra-record expert declarations in the district court and stating that the declarations were properly before the appellate court because they were "necessary to determine whether the agency has considered all relevant factors and has explained its decision.") (internal citation omitted).

Agency action, including designation and certification of an administrative record, is entitled to a "presumption of regularity." See McCrary v. Gutierrez, 495 F.Supp.2d 1038, 1041 (N.D. Cal. 2007) (citing Bar MK Ranches v. Yuetter, 994 F.2d 735, 739–40 (10th Cir. 1993) (while the agency "may not unilaterally determine what constitutes the administrative record" the courts "assume[ ] the agency properly designated the [AR] absent clear evidence to the contrary")); see

also Ctr. for Native Ecosystems v. Salazar, 711 F.Supp.2d 1267, 1274 (D. Colo. 2010). The party seeking supplementation bears the burden of overcoming this presumption by "clear evidence." See Bar MK Ranches, 994 F.2d at 740; Glasser v. NMFS, 2008 WL 114913, *1 (W.D. Wash. Jan.10, 2008); In re Delta Smelt Consolidated Cases, 2010 WL 2520946, *2 (E.D. Cal. 2010). Here, each party has filed several extra-record declarations in support of their motions, to which the opposing party has objected.

1. Plaintiffs' objections to Defendants' extra-record evidence

In their combined cross-motion for summary judgment and opposition to Plaintiffs' motion for summary judgment, Defendant filed four extra-record declarations. Plaintiffs object to two of them: (1) the Cody Declaration; and (2) the Clark Declaration.

A. Cody declaration

Jeannine Cody is a Fishery Biologist for NMFS, Office of Protected Resources, Conservation and Permits Division. Cody Decl. ¶ 1. Part of her responsibilities include reviewing, analyzing and processing requests for authorizations to take marine mammals incidental to specified activities pursuant to the MMPA. Cody Decl. ¶ 1. Among other things, Cody was the principal program analyst for and a primary drafter of the OBIA analysis for the SURTASS LFA sonar Draft Supplemental Environmental Impact Statements and Final Supplemental Environmental Impact Statements, for which NMFS was a cooperating agency. Cody Decl. ¶ 2. She was extensively involved in, and has extensive personal knowledge about, the process NMFS used for designating OBIAs contained in the Final Rule. Cody Decl. ¶ 2.

Cody explained the process used for identifying OBIAs. Cody Decl. ¶¶ 5-11. She explained that, among other things, to be eligible for OBIA consideration and designation, an area had to be located more than 12 nautical miles from any coastline, including offshore islands. Cody Decl. ¶ 3. This criteria reflected the fact that the coastal standoff zone already prohibited the Navy from allowing the LFA sonar sound pressure levels to exceed 180 decibels within 12 nm of any coastline, including offshore islands and emergent land masses. Cody Decl. ¶ 3. In addition, a potential OBIA had to meet at least one of the biological criteria to establish biological importance. Cody Decl. ¶ 3. The remainder of Cody's declaration counters the statements made by Plaintiffs'

expert, Eric Hoyt, in his declaration stating that fifteen MPAs were improperly deemed ineligible for OBIA designation based on the erroneous finding that they fell entirely within the 12 nm coastal standoff zone. Cody Decl. ¶ 4.

At the end of the identification process, Cody determined that approximately 353 of the 403 areas identified as potential OBIAs by Hoyt in his book in 2005 were ineligible for OBIA designation because they fell entirely within the 12 nm coastal standoff zone or even if the area extended beyond the 12 nm coastal standoff zone, Cody could not find any information indicating that any part outside the coastal standoff zone met at least one of the biological criteria used to establish biological importance. Cody Decl. ¶ 7. Cody determined that 345 of the MPAs identified by Hoyt in his book in 2011 were ineligible for OBIA consideration for the same reasons. Cody Decl. ¶ 11. Cody also examined each of the fifteen potential OBIA areas that Hoyt stated in his declaration were improperly rejected as OBIAs. Cody Decl. ¶¶ 13-34.

Plaintiffs object to the Cody declaration on the ground that it presents impermissible post-hoc rationalizations for the agency actions at issue in this case. See Alvarado Community Hosp. v. Shalala, 155 F.3d 1115, 1124 (9th Cir. 1998) ("A district court may go outside the administrative record for the purposes of background information or 'for the limited purposes of ascertaining whether the agency considered all the relevant factors or fully explicated its course of conduct or grounds of decision.' Of course, explanatory materials cannot be used to offer new rationalizations for agency action.") (internal citations omitted). Plaintiffs argue that the Cody declaration relies on numerous studies that are not in the administrative record or that post-date (or immediately pre-date) the Final Rule. See, e.g., Cody Decl. ¶ 17. Finally, Plaintiffs argue that evidence of agency explanations that does not appear in the record and was not disclosed to the public should not be considered by the Court. See Earth Island Inst. v. US Forest Serv., 442 F.3d 1147, 1160, 1167 (9th Cir. 2006) (stating that if data was concealed, then the agency could be found to have abused its discretion).

The Cody declaration was properly offered to explain the OBIA designation process that took place well before the Final Rule and to rebut paragraphs 11-13 of the Hoyt declaration submitted by Plaintiffs, in which Hoyt identifies fifteen areas that allegedly extend beyond the 12

nm coastal standoff zone and are allegedly important biological habitat. The Cody declaration is therefore not stricken as a whole, but its references to documents that immediately pre-date or post-date the Final Rule are stricken. See Ctr. For Biological Diversity v. US Fish and Wildlife Serv., 450 F.3d 930, 943 (9th Cir. 2006) (holding that a party may not use "post-decision information as a new rationalization either for sustaining or attacking the Agency's decision."); see also Sierra Club v. Kimbell, 595 F. Supp. 2d 1021, 1038 (D. Minn. 2009) ("it is not reasonable to expect the [agency] to revise its work yet again on the basis of data that became available only a few months before the FEIS was issued.").

B. Clark declaration

Christopher Clark is the I.P. Johnson Director of the Bioacoustics Research Program at the Cornell Laboratory of Ornithology, which, among other things, develops equipment used by scientists around the world to study communication by animals, including cetaceans. Clark Decl. ¶ 1, and n.1. He is also the Senior Scientist in the Department of Neurobiology and Behavior at Cornell University. Clark Decl. ¶ 1.

Clark's declaration responds to several statements made in the declaration filed by Plaintiffs' expert John Calambokidis. For example, Calambokidis stated that the lack of response data to LFA for blue whales constitutes a major shortcoming of the research conducted to date, including the SRP on which the agency relied. Clark Decl. ¶ 4. Clark explains that data for the blue whales and other cetaceans is sparse, but that there is no evidence to support a hypothesis that the relatively minor blue whale responses observed during the SRP could lead to a biologically significant impact or that SURTASS LFA is having any impact on blue whales. Clark Decl. ¶ 5. Clark also disagrees that the lack of data is significant. Clark Decl. ¶ 5. Clark states that the observations from research on mid-frequency sonar do not justify a conclusion that blue whales should have a stronger response to LFA than MFA. Clark Decl. ¶ 7.

Clark responds to statements made in the Weilgart declaration and the studies on which those statements were based. For example, Weilgart testified that SURTASS LFA would have a significant impact on sperm whales, but Clark disagrees with that conclusion. Clark Decl. ¶ 10. Clark notes that the Bowles survey on which Weilgart relies was designed to evaluate whether

marine mammals responded to a synthetic low-frequency underwater sound with a relatively loud source level, which was used during a five-day project evaluating the feasibility of using sound to measure ocean temperature. Clark Decl. ¶ 11. Clark notes that the survey itself stated that: "There was little chance that a statistically useful sample of observations could be obtained before, during and after transmissions in such a short period." Clark Decl. ¶ 11. Clark states that to conclude as Weilgart does that sperm whale individuals and/or populations would be negatively impacted by SURTASS LFA is a "huge leap that is not supported by the best available science or logic." Clark Decl. ¶ 15. Plaintiffs' request to strike the Clark declaration is denied because the declaration is a response to the Weilgart and Calambokidis declarations.

2. Defendants' objections to Plaintiffs' supplemental declarations

In connection with their objections to Defendants' extra-record declarations of Cody and Clark, Plaintiffs have submitted three supplemental declarations from Hoyt, Weilgart and Calambokidis. Plaintiffs argue that the declarations are admissible because they respond to the Cody and Clark declarations, and because they address issues that were raised in the original Weilgart, Hoyt and Calambokidis declarations. Plaintiffs also argue that the supplemental declarations are admissible to show harm. Defendants do not object to the supplemental Calambokidis declaration, but argue that portions of Plaintiffs' supplemental Hoyt and Weilgart declarations should be stricken.

A. Supplemental Hoyt declaration

Defendants argue that paragraphs 25-31 of the supplemental Hoyt declaration should be stricken. Those paragraphs detail six areas that were identified in the FSEIS as having been eliminated from consideration for protections as OBIAs because they fell within the 12 nm coastal exclusion, but which Hoyt found to touch or almost touch the 12 nm line based on a review of the GIS coordinates, and where low-frequency specialists or sperm whales exist. Hoyt Decl. ¶¶ 25-31. This portion of the Hoyt declaration does not appear to respond to anything in the Cody or Clark declarations. For example, the six areas were not mentioned in the Cody declaration. Thus, paragraphs 25-31 of the supplemental Hoyt declaration are stricken.

B. Supplemental Weilgart declaration

Defendants argue that paragraphs 9-10 of the supplemental Weilgart declaration should be stricken. Those paragraphs address Weilgart's belief that seasonal OBIAs are insufficient to protect whales and the Barlow predictive modeling identified high densities of blue and sperm whales in certain areas. Plaintiffs argue that paragraph nine of the Weilgart declaration responds to Defendants' after-the-fact explanation that seasonal OBIAs provide adequate protection for sperm whales exist. Plaintiffs argue that paragraph ten responds to Defendants' contention that Plaintiffs did not demonstrate that a specific density model is better than the information on which Defendants relied.

However, the Cody or Clark declarations do not address sperm whales in seasonal OBIAs, and in fact, the Clark declaration does not mention OBIAs. Further, paragraph ten is additional argument about density models that does not respond to anything in the Clark or Cody declarations. Thus, paragraphs nine and ten of the supplemental Weilgart declaration are stricken.

3. Plaintiffs' further objections to Defendants' supplemental declarations

Defendants submitted additional supplemental declarations from Cody and Clark, which they argue are admissible because they respond to the supplemental declarations of Hoyt, Weilgart and Calambokidis, and because they address Plaintiffs' allegations of harm. Further, Defendants argue that the LOAs attached to the supplemental Cody declaration are offered to show that the objections raised in the initial Hoyt declaration are moot.

Plaintiffs argue that the supplemental Cody declaration offers post-decision explanations for the agencies' actions, which are not admissible. See Alvarado Cmty. Hosp. v. Shalala, 155 F.3d 1115, 1124 (9th Cir. 1998). However, to the extent that the supplemental Cody and Clark declarations respond to the supplemental Hoyt, Weilgart and Calambokidis declarations, they are admissible.

4. Plaintiffs' Motion to File Additional Declarations

On November 1, 2013, Plaintiffs filed a motion to file additional declarations to support Plaintiffs' standing to seek injunctive relief. "To satisfy Article III's standing requirements, a plaintiff must show (1) it has suffered an 'injury in fact' that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the

challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc., 528 U.S. 167, 180–81 (2000) (quoting Lujan v. Defenders of Wildlife, 504 U.S. 555, 560–61 (1992)). Plaintiffs in environmental cases need not demonstrate injury for each area covered by the agency action to establish standing. In Salix v. U.S. Forest Serv., 2013 WL 2099811, at *4 (D. Mont. May 16, 2013), the court considered whether the plaintiffs had standing under ESA to challenge the Northern Rockies Lynx Amendment, a "programmatic plan amendment[ ]" to the land and resource management plans of 18 National Forests in the Northern Rocky Mountains analysis area. Salix, 2013 WL 2099811, at *1. The Salix court relied on Ninth Circuit authority on standing to hold:

> Under Sierra Forest Legacy [v. Sherman, 646 F.3d 1161, 1179 (9th Cir. 2011)] and Pacific Rivers [Council v. United States Forest Service, 689 F.3d 1012 (9th Cir.2012)], plaintiffs may challenge a programmatic regulation that affects multiple forests so long as they allege a particularized injury in a specific area that is affected by the regulation and that will be subject to an agency action that relies on the regulation. It is not necessary for plaintiffs to assert a separate claim challenging the project or for plaintiffs to assert a particularized injury for every forest subject to the regulation.

Salix, 2013 WL 2099811, at *4.

In this motion, Plaintiffs propose filing five additional declarations to further demonstrate membership interests in all marine regions subject to the LOAs. Although these declarations are not strictly necessary to establish standing, Defendants have not shown that they would be prejudiced by the filing of these declarations, which are substantially similar to Plaintiffs' previous declarations supporting standing. The additional declarations provide relevant additional evidence of Plaintiffs' interests in the regions affected by the August 2013 LOAs. In addition, there has been no showing that Plaintiffs unduly delayed in obtaining these declarations. Therefore, there is good cause to grant Plaintiffs' motion to file additional declarations. See Civil L.R. 7-3(d).

Conclusion

Accordingly, Plaintiffs' Motion for Summary Judgment is granted in part and denied in part and Defendants' Motion for Summary Judgment is granted in part and denied in part. This matter is set for a case management conference on April 14, 2014 at 3:00 p.m. Prior to the case

management conference, the parties shall meet and confer and file a joint case management conference statement no later than April 7, 2014.

IT IS SO ORDERED.

Dated: March 28, 2014

ELIZABETH D. LAPORTE
United States Chief Magistrate Judge