DEPARTMENT OF DEFENSE

Department of the Navy

Supplemental Record of Decision for Surveillance Towed Array Sensor System Low Frequency Active (SURTASS LFA) Sonar

AGENCY: Department of the Navy, DoD.

ACTION: Record of Decision.

SUMMARY: The Department of the Navy (DON) reaffirms its August 15, 2012 Record of Decision (ROD) to employ up to four Surveillance Towed Array Sensor System Low Frequency Active (SURTASS LFA) sonar systems (including both LFA and compact LFA) with certain geographical restrictions and mitigation monitoring designed to reduce potential adverse effects on the marine environment, including operating LFA sonar systems in the waters in which the Hawaiian Islands Stock Complex of common bottlenose dolphins could occur. The August 15, 2012 ROD implemented the preferred alternative, Alternative 2, identified in the 2012 Final Supplemental Environmental Impact Statement (FSEIS)/Supplemental Overseas Environmental Impact Statement (SOEIS) for SURTASS LFA sonar.

Following litigation challenging the adequacy of that 2012 FSEIS/SOEIS, the District Court for the Northern District of California determined that the DON failed to use the best available data when it determined potential impacts from the employment of SURTASS LFA sonar systems on one stock of common bottlenose dolphins in Hawaiian waters rather than the more current information that shows five stocks of common bottlenose dolphins in Hawaiian waters. Accordingly, DON prepared a narrowly-tailored SEIS/SOEIS to remedy this deficiency. In accordance with 40 CFR § 1501.6, the National Marine Fisheries Service (NMFS) was a cooperating agency for the development of the narrowly-tailored SEIS/SOEIS.

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SUPPLEMENTARY INFORMATION: The 2015 narrowly-tailored SEIS/SOEIS was limited to providing a revised analysis of potential impacts of SURTASS LFA sonar employment on the five stocks that comprise the Hawaiian Islands Stock Complex of common bottlenose dolphins (Kauai/Niihau, Oahu, 4-Islands [Molokai, Lanai, Maui, and Kahoolawe], Hawaii Island, and Hawaii

Pelagic stocks) in the geographic area where they could occur. For background, the "Summary," "Supplementary Information," "Background and Issues," "Purpose of the SURTASS LFA Sonar FSEIS/SOEIS" and "Alternatives Considered" sections of the August 15, 2012 ROD are incorporated by reference.

Because of this limited scope, the alternatives evaluated in the 2015 SEIS/SOEIS were the same as those analyzed in the 2012 FSEIS/SOEIS, which included the No Action Alternative, Alternative 1, and Alternative 2. Alternative 1 from the 2012 FSEIS/SOEIS included use of the same Offshore Biologically Important Areas (OBIAs) for marine mammals as those in the preferred alternative from the 2007 FSEIS/SOEIS. Alternative 2 from the 2012 FSEIS/SOEIS, the alternative chosen in the DON's August 15, 2012 ROD, differed from Alternative 1 only in that Alternative 2 included a comprehensive update of OBIAs. With respect to waters where any of the five stocks that comprise the Hawaiian Islands Stock Complex of common bottlenose dolphins could occur, however, the OBIAs in Alternatives 1 and 2 are the same because the comprehensive update in Alternative 2 did not change the OBIAs located in Hawaiian waters.

SUMMARY OF PUBLIC INVOLVEMENT

On July 1, 2014, the public was notified of the DON's intent to prepare a narrowly-tailored SEIS/SOEIS to analyze the

potential impact of SURTASS LFA sonar on the five stocks comprising the Hawaiian Islands Stock Complex of common bottlenose dolphins. Commencing with the filing of the Draft SEIS/SOEIS (DSEIS/SOEIS) with the U.S. Environmental Protection Agency (EPA), copies of the DSEIS/SOEIS for SURTASS LFA sonar were distributed to agencies and officials of Federal, state (Hawaii), and local governments and organizations, as well as to other interested parties. The EPA's Notice of Availability on the DSEIS/SOEIS was published in the *Federal Register* on October 24, 2014 (EIS No. 20140308), beginning the 45-day public comment period on the DSEIS/SOEIS. Consistent with CEQ NEPA regulations and DON NEPA policies, copies of the DSEIS/SOEIS were distributed to agencies and officials of Federal, state, and local governments, organizations, and other interested parties and comments were solicited. Public meetings were not held. The DON neither received any requests by the public for meetings or hearings on the DSEIS/SOEIS nor for an extension of the public comment period. The Navy received comment letters/emails on the DSEIS/SOEIS from one Federal agency and two State of Hawaii departments/offices. Those comments were addressed in the 2015 FSEIS/SOEIS.

ENVIRONMENTAL IMPACTS

The 2015 FSEIS/SOEIS analyzed the potential impacts on the five stocks comprising the Hawaiian Islands Stock Complex (Kauai/Niihau, Oahu, 4-Islands, Hawaii Island, and Hawaii Pelagic) of common bottlenose dolphins that could result from the implementation of the No Action Alternative, Alternative 1, and Alternative 2 from the 2012 FSEIS/SOEIS and was updated using the best available literature, data, and information. The types of potential impacts on the five stocks comprising the Hawaiian Islands Stock Complex of common bottlenose dolphins from SURTASS LFA sonar operations that the DON addressed in the 2015 FSEIS/SOEIS included auditory impacts such as masking, behavioral reactions, and strandings. The DON determined that the assumptions and conclusions with respect to other potential impacts on the five stocks comprising the Hawaiian Islands Stock Complex of common bottlenose dolphins presented in the 2001, 2007, and 2012 National Environmental Policy Act (NEPA) and Executive Order (EO) 12114 documents remain valid. The analyses and conclusions in the August 15, 2012 ROD are therefore incorporated by reference to the extent that those analyses and conclusions relate to potential impacts on the five stocks comprising the Hawaiian Islands Stock Complex of common bottlenose dolphins not specifically addressed in the 2015 FSEIS/FSOEIS.

Potential Environmental Impacts under the No Action Alternative

Under this alternative, the DON would not employ SURTASS LFA sonar, including within the waters in which the five stocks of the Hawaiian Islands Stock Complex of common bottlenose dolphins could occur. Thus, any potential impact to the five Hawaii common bottlenose dolphin stocks from the proposed activities would be eliminated. However, as discussed in previous NEPA and EO 12114 documentation for SURTASS LFA sonar, the No Action Alternative does not meet the DON's purpose and need.

Potential Impacts under Alternatives 1 and 2

As noted above, with respect to waters in which any of the five stocks that comprise the Hawaiian Islands Stock Complex of common bottlenose dolphins could occur, the OBIAs in Alternatives 1 and 2 are the same. The potential impacts assessed in the 2015 FSEIS/SOEIS are therefore the same under either Alternative 1 or Alternative 2.

Masking occurs when noise interferes with an animal's ability to detect, discriminate, recognize, or communicate signals of interest. Masking is most pronounced when noise is at the same frequency as the sound of interest and when noise occurs frequently. Masking impacts on the five stocks comprising the Hawaiian Islands Stock Complex of common bottlenose dolphins from exposure to SURTASS LFA sonar signals would be limited for

a number of reasons. First, the frequency range of SURTASS LFA sonar transmissions (<500 Hertz [Hz]) is at the lower end of the hearing range of common bottlenose dolphins (estimated from 150 Hz to 160 kilohertz [kHz]). Hearing of common bottlenose dolphins is most sensitive at frequencies between 14.1 kHz and 28.2 kHz, which does not overlap with the frequency range of SURTASS LFA sonar transmissions. Therefore, there is limited potential for common bottlenose dolphins to even be able to hear SURTASS LFA sonar signals, much less have them mask important sounds. Second, the bandwidth of any transmitted signal from SURTASS LFA sonar is limited (30 Hz), and the instantaneous bandwidth at any given time of the signal duration is small, on the order of ≤10 Hz. Since the amount of masking is directly related to the bandwidth of narrow-band signals, such as those transmitted by SURTASS LFA sonar, the potential for any masking in common bottlenose dolphins is expected to be minimal and unlikely.

The primary potential impact on common bottlenose dolphins from exposure to SURTASS LFA sonar is change in a biologically significant behavior, although common bottlenose dolphins are not particularly sensitive to low-frequency sounds such as SURTASS LFA sonar. Since common bottlenose dolphins have their most sensitive hearing at frequencies between 14 kHz and 28 kHz, recent studies have focused on the potential impacts of mid-

frequency active sonar (MFAS) on the five stocks comprising the Hawaiian Islands Stock Complex (Kauai/Niihau, Oahu, 4-Islands, Hawaii Island, and Hawaii Pelagic) of common bottlenose dolphins (Baird et al. 2014). Common bottlenose dolphins in the vicinity of the Pacific Missile Range Facility in the waters of Kauai, Hawaii were tagged prior to scheduled MFAS use. One individual dolphin was able to be tagged coincident with MFAS transmissions; the animal showed no movement away from the region, despite received levels estimated at 149 to 168 decibels relative to one microPascal (root mean squared) (dB re 1 µPa [rms]). Given the current behavioral response function for MFAS, while a high probability of a significant behavioral reaction has previously been predicted at these received levels (RLs), such behavioral reactions were not observed.

Strandings occur when marine mammals passively (unintentionally) or purposefully come ashore, either alive, but debilitated or disoriented, or dead. The use of SURTASS LFA sonar has not been associated with any of the 11 known mass strandings that occurred from 2013 through 2014 in the North Pacific Ocean. Thus, there is no new information that suggests any stranding risk for the five stocks comprising the Hawaiian Islands Stock Complex of common bottlenose dolphins from use of SURTASS LFA sonar.

Risk Assessment

The same analytical process used in previous risk assessment analyses of the potential for impacts from SURTASS LFA sonar use and that have been documented in the previous 2001, 2007, and 2012 NEPA/EO 12114 documents and in the 2012 MMPA rulemaking for SURTASS LFA sonar employment was used in the 2015 FSEIS/SOEIS. Two modeling locations were selected: one north and one south of the Main Hawaiian Islands ("Hawaii North" and "Hawaii South" mission areas), which represent reasonable locations where SURTASS LFA sonar could be employed. Abundance and density estimates for each of the five stocks comprising the Hawaiian Islands Stock Complex (Kauai/Niihau, Oahu, 4-Islands, Hawaii Island, and Hawaii Pelagic) of common bottlenose dolphins were derived at the two representative SURTASS LFA sonar mission areas during all seasons. These population data were derived from the most current, available published literature and documentation.

Estimates of the percentage of common bottlenose dolphin stocks affected by SURTASS LFA sonar employment in the two potential Hawaii mission areas were derived for the 2015 FSEIS/SOEIS using the updated population data from the most current, available published literature and documentation. The results of the DON's analysis demonstrate that 0.00% of any stock of Hawaii common bottlenose dolphins would be exposed to

sound levels ≥180 dB re 1 µPa (rms) in either Hawaii mission area. Thus, no Hawaii common bottlenose dolphins are expected to be affected through injury or mortality from exposure to SURTASS LFA sonar transmissions. At exposures of 120 to 180 dB re 1 µPa (rms) (single ping equivalent [SPE]), the overall percentages for any of the five potentially affected Hawaii common bottlenose dolphin stocks range from 0.00% to 0.82% during employment of SURTASS LFA sonar for one modeled mission in each of the proposed two mission areas. SPE is a function of sound pressure level (dB re 1 µPa) and accounts for the energy of all the SURTASS LFA sonar transmissions that a modeled animal receives during an entire simulated LFA sonar mission (see 2001, 2007 and 2012 EISs/OIESs for more detail). The highest estimated percentage of any of the five stocks comprising the Hawaiian Islands Stock Complex of common bottlenose dolphins potentially affected at exposures of 120 to 180 dB re 1 µPa (rms) during employment of SURTASS LFA sonar is 0.8241% of the Hawaii Pelagic stock of common bottlenose dolphins during proposed employment in the Hawaii North mission area. The highest potential impact to any insular stock is 0.0188% of the Hawaii Island stock during proposed employment in the Hawaii South mission area; the remaining insular stocks have much lower potential impacts. The estimated stock values support the conclusion that estimates of potential impacts from employment of SURTASS LFA sonar on

Hawaii common bottlenose dolphin stocks are expected to be below the conditions delineated by NMFS in the Letters of Authorization (LOAs) issued under the 2012 Final Rule.

In summary, the potential impacts from SURTASS LFA sonar employment on the five stocks comprising the Hawaiian Islands Stock Complex of common bottlenose dolphins from injury (non-auditory or permanent loss of hearing) under either Alternative 1 or 2 are considered negligible, with neither mortality nor any injury (MMPA Level A harassment) being reasonably foreseeable. The potential impacts from temporary loss of hearing or behavioral change (significant change in a biologically significant behavior) are considered minimal and are expected to be limited to MMPA Level B harassment. The potential for auditory masking or strandings due to exposure to SURTASS LFA sonar signal transmissions is expected to be minimal and unlikely. Impacts are not expected to affect rates of recruitment or survival of the common bottlenose dolphin stocks of Hawaii. Thus, impacts to the Hawaii Stock Complex of common bottlenose dolphins are not significant when SURTASS LFA sonar is employed in accordance with the prescribed mitigation measures (geographic restrictions, monitoring/reporting, and sonar shutdown protocols). These conclusions are consistent with the selection of Alternative 2 in the August 15, 2012 ROD.

Cumulative Impacts

Recent literature provides information regarding oceanic noise levels to which any of the five stocks comprising the Hawaiian Islands Stock Complex of common bottlenose dolphins may be exposed. Recent measurements of ocean noise at two sites in the Hawaiian Islands found a seasonal pattern of increased background noise levels of up to 8 dB from January through April due to humpback whale vocalizations at the Kauai site. At both the Kauai and Hawaii Island sites, distant shipping caused an increase of 7 to 13 dB during months in which shipping was reported. After considering this additional information on ambient noise levels in Hawaiian waters, and the SURTASS LFA sonar's nominal 7.5 to 10% duty cycle, it is reasonable to conclude that any cumulative impacts associated with employment of SURTASS LFA sonar will not result in a reasonably foreseeable adverse or significant impact on the five stocks comprising the Hawaiian Islands Stock Complex of common bottlenose dolphins.

AGENCY CONSULTATION AND COORDINATION

NMFS agreed on 3 November 2014 to participate as a cooperating agency under CEQ Regulations, 40 CFR 1501.6, in the preparation of the narrowly-tailored SEIS/SOEIS for SURTASS LFA sonar due, in part, to their responsibilities under section 101(a)(5)(A) of the MMPA.

RESPONSES TO COMMENTS RECEIVED ON THE FSEIS

There were no comments submitted following the publication of the 2015 FSEIS/SOEIS for SURTASS LFA.

CONCLUSIONS

Based upon my review of the analyses summarized above, which demonstrate that the potential impacts are consistent with the selection of Alternative 2 in the August 15, 2012 ROD, I reaffirm the decision to implement Alternative 2 including certain geographical restrictions and mitigation monitoring designed to reduce potential adverse effects on the marine environment. This decision permits the DON to reasonably fulfill its purpose of providing U.S. forces with reliable, effective, and efficient long-range detection of new-generation, quiet submarines, while the geographic restrictions and mitigation monitoring requirements constitute all practical means to avoid or minimize environmental harm from the alternative selected.

Operational employments of the SURTASS LFA sonar systems are contingent upon issuance of annual LOAs and Incidental Take Statements (ITS) for each sonar system in areas of the global oceans specified in the DON's annual LOAs and ITS request.

24 MARCH 2015
Date

Steven Iselin
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Assistant Secretary of the
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