



DEPUTY SECRETARY OF DEFENSE
1010 DEFENSE PENTAGON
WASHINGTON, DC 20301-1010

AUG 10 2017

MEMORANDUM FOR SECRETARY OF THE NAVY

SUBJECT: National Defense Exemption from Requirements of the Marine Mammal Protection Act for Department of Defense Surveillance Towed Array Sensor System Low Frequency Active Sonar Military Readiness Activities

Pursuant to Title 16, Section 1371(f), of the United States Code, and having conferred with the Secretary of Commerce, I have determined that it is necessary for the national defense to exempt all military readiness activities that employ Surveillance Towed Array Sensor System (SURTASS) Low Frequency Active (LFA) sonar from compliance with the requirements of the Marine Mammal Protection Act, Title 16, Sections 1361-1421h, of the United States Code. A military readiness activity is defined in Section 315(f) of Public Law 107-314.

This exemption is effective August 13, 2017, and shall remain in force for a period of two years from that date or until such time as the National Marine Fisheries Service issues Regulations and Letters of Authorization under Title 16, Section 1371 for SURTASS LFA sonar military readiness activities, whichever is earlier. During the exemption period, all military readiness activities that involve the use of SURTASS LFA sonar shall comply with the parameters and mitigation, monitoring, and reporting measures set forth in Attachment 1.

A handwritten signature in black ink, appearing to read "Paul M. Slavin".

Attachment:
As stated



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Surveillance Towed Array Sensor System (SURTASS) Low Frequency Active (LFA) Sonar Mitigation, Monitoring and Reporting Measures

I. PARAMETERS

1. This exemption covers use of SURTASS LFA sonar onboard the USNS VICTORIOUS (T-AGOS 19), the USNS ABLE (T-AGOS 20), the USNS EFFECTIVE (T-AGOS 21), and USNS IMPECCABLE (T-AGOS 23). The sound signals transmitted by the SURTASS LFA sonar source must be between 100 and 500 Hertz (Hz) with a source level for each of the 18 projectors of no more than 215 decibels (dB) re: 1 micro Pascal at 1 meter (m) root mean square (rms) and a maximum duty cycle of 20 percent.
2. The Navy will carry out an estimated total of 20 nominal active sonar missions annually among these four vessels (or equivalent number of shorter missions), but shall not exceed a total of 255 hours of sonar transmit time per vessel per year during the period of this exemption within the following areas:
 - (a) Up to 16 nominal missions annually in the western North Pacific Ocean, which includes the following mission areas: east of Japan; the north Philippine Sea; the west Philippine Sea; offshore Guam; the Sea of Japan; the East China Sea; the South China Sea; offshore Japan (25° to 40° N and 10° to 25° N), and northeast of Japan.
 - (b) Up to two nominal missions annually in the central North Pacific Ocean that include the Hawaii North and Hawaii South mission areas.
 - (c) Up to two nominal missions annually in the Indian Ocean that include the Arabian Sea, the Andaman Sea and northwest of Australia mission areas.

II. MITIGATION

1. SURTASS LFA sonar military readiness activities must be conducted in a manner that minimizes, to the greatest extent practicable, adverse impacts on marine mammals, their habitats, and the availability of marine mammals for subsistence uses. When conducting the military readiness activities, the following mitigation measures must be implemented:
 - (a) **Personnel Training—Lookouts:**
 - (1) The Navy shall train the lookouts in the most effective means to ensure quick and effective communication within the command structure in order to facilitate implementation of protective measures if they spot marine mammals.
 - (2) The Navy will employ one or more marine mammal biologists qualified in conducting at-sea marine mammal visual monitoring from surface vessels to train and qualify designated ship personnel to conduct at-sea visual monitoring. This training may be accomplished either in-person, or via video training.
 - (b) **General Operating Procedures:**
 - (1) Prior to SURTASS LFA sonar operations, the Navy will promulgate executive guidance for the administration, execution, and compliance with this exemption.
 - (2) SURTASS LFA sonar signals must not be transmitted at a frequency greater than 500 Hertz (Hz).
 - (3) The Navy must ensure, to the greatest extent practicable, that no marine mammal is subjected to a sound pressure level of 180 dB re: 1 μ Pa (rms) or greater from SURTASS LFA sonar operations.
 - (c) **Commercial and Recreational SCUBA Diving Mitigation Zone**

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- (1) The Navy will establish a mitigation zone for human divers at 145 dB re: 1 μ Pa at 1 m around all known human commercial and recreational diving sites. Although this geographic restriction is intended to protect human divers, it will also reduce the LFA sound levels received by marine mammals located in the vicinity of known dive sites
- (d) **LFA Sonar Mitigation Zone and Additional 1-Kilometer (km) Buffer Zone:**
- (1) Prior to commencing and during SURTASS LFA sonar transmissions, the Navy will use near real-time environmental data and underwater acoustic prediction models to determine the propagation of the SURTASS LFA sonar signals in the mission area and the distance from the SURTASS LFA sonar source to the 180-decibel (dB) re: 1 μ Pa isopleth (*i.e.*, the LFA sonar mitigation zone).
 - (2) The Navy will establish a 180-dB LFA sonar mitigation zone around the surveillance vessel that is equal in size to the 180-dB re: 1 μ Pa isopleth (*i.e.*, the volume subjected to sound pressure levels of 180 dB or greater) as well as establish a one-kilometer (1-km) buffer zone around the LFA sonar mitigation zone.
 - (3) The Navy will update these sound field estimates every 12 hours or more frequently depending upon changing meteorological or oceanographic conditions; and at least 30 minutes prior to any SURTASS LFA sonar transmission.
- (e) **Ramp-Up Procedures for the HF/M3 System:**
- (1) The Navy will ramp up the High Frequency/Marine Mammal Monitoring (HF/M3) active sonar from a power level beginning at a maximum source sound pressure level of 180 dB re: 1 μ Pa @ 1 m (rms) in 10-dB increments to operating levels over a period of no less than five minutes:
 - (A) At least 30 minutes prior to any SURTASS LFA sonar transmission;
 - (B) Prior to any SURTASS LFA sonar calibrations or testing that are not part of regular SURTASS LFA sonar transmissions; and
 - (C) Any time after individuals have powered down the HF/M3 active sonar source for more than two minutes.
 - (2) The Navy will not increase the HF /M3 active sonar system's sound pressure level once HF /M3 operators detect a marine mammal. Resumption of the ramp-up of HF/M3 sonar system would not occur until marine mammals are no longer detected by the HF /M3 active sonar system, passive acoustic monitoring, or visual monitoring.
- (f) **Suspension/Delay for SURTASS LFA Sonar Transmissions:**
- If a marine mammal is detected through monitoring within either the LFA sonar mitigation zone or the 1-km buffer zone, the Navy will immediately suspend or delay SURTASS LFA sonar transmissions.
- (g) **Resumption of SURTASS LFA Sonar Transmissions:**
- The Navy may resume/commence SURTASS LFA sonar transmissions 15 minutes after:
- (1) All marine mammals have left the area of the LFA sonar mitigation zone and the 1- km buffer zone; and/or
 - (2) There is no further detection of any marine mammal within the LFA sonar mitigation zone plus the 1-km buffer zone as determined by the passive or active acoustic or visual monitoring protocols.
- (h) **Geographic Restrictions:**
- (1) The Navy will not operate SURTASS LFA sonar such that: the SURTASS LFA sonar sound field exceeds 180 dB re: 1 μ Pa (rms):
 - (A) At a distance of less than or equal to 12 nautical miles (nmi) (22 km (14 miles (mi))); from any coastline, including offshore islands; and
 - (B) At a distance of less than 1 km (0.62 mi; 0.54 nmi) seaward of the outer perimeter of any Offshore Biologically Important Area (OBIA) for marine mammals designated in the table below ,or

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identified through the Adaptive Management Process, specified herein, within the period of the NDE's effectiveness.

- (2) The OBIA's for marine mammals (with specified periods of effectiveness) for SURTASS LFA sonar routine training, testing, and military operations are:

Name of Area	Location of Area	Months of Importance
Georges Bank	Northwest Atlantic Ocean	Year-round
Roseway Basin Right Whale Conservation Area	Northwest Atlantic Ocean	June through December, annually
Great South Channel, U.S. Gulf of Maine, and Stellwagen Bank National Marine Sanctuary (NMS)	Northwest Atlantic Ocean/ Gulf of Maine	January 1 to November 14, annually Year-round for Stellwagen Bank NMS
Southeastern U.S. Right Whale Habitat	Northwest Atlantic Ocean	November 15 to January 15, annually
Gulf of Alaska	Gulf of Alaska	March through September, annually
Navidad Bank	Caribbean Sea/ Northwest Atlantic Ocean	December through April, annually
Coastal waters of Gabon, Congo and Equatorial Guinea	Southeastern Atlantic Ocean	June through October, annually
Patagonian Shelf Break	Southwestern Atlantic Ocean	Year-round
Southern Right Whale Seasonal Habitat	Southwestern Atlantic Ocean	May through December, annually
Central California	Northeastern Pacific Ocean	June through November, annually
Antarctic Convergence Zone	Southern Ocean	October through March, annually
Piltun and Chayvo offshore feeding grounds	Sea of Okhotsk	June through November, annually
Coastal waters off Madagascar	Western Indian Ocean	July through September, annually for humpback whale breeding and November through December, annually for migrating blue whales.
Madagascar Plateau, Madagascar Ridge, and Walters Shoal	Western Indian Ocean	November through December, annually
Ligurian-Corsican-Provencal Basin and Western Pelagos Sanctuary	Northern Mediterranean Sea	July to August, annually
Penguin Bank, Hawaiian Islands Humpback Whale NMS	North-Central Pacific Ocean	November through April, annually
Costa Rica Dome	Eastern Tropical Pacific Ocean	Year-round
Great Barrier Reef	Coral Sea/ Southwestern Pacific Ocean	May through September, annually
Bonney Upwelling	Southern Ocean	December through May, annually
Northern Bay of Bengal and Head of Swatch-of-No-Ground (SoNG)	Bay of Bengal/ Northern Indian Ocean	Year-round

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Olympic Coast NMS and Prairie, Barkley Canyon, and Nitnat Canyon	Northeastern Pacific Ocean	Olympic NMS: December, January, March, and May annually. Prairie, Barkley Canyon, and Nitnat Canyon: June through September annually
Abrolhos Bank	Southwest Atlantic Ocean	August through November, annually
Grand Manan North Atlantic Right Whale Critical Habitat	Bay of Fundy, Canada	June through December, annually
Eastern Gulf of Mexico	Eastern Gulf of Mexico	Year-round
Southern Chile Coastal Waters	Gulf of Corcovado, Southeast Pacific Ocean; Southwestern Chile	February to April, annually
Offshore Sri Lanka	North-Central Indian Ocean	December through April, annually
Camden Sound/Kimberly Region	Southeast Indian Ocean; northwestern Australia	June through September, annually
Perth Canyon	Southeast Indian Ocean; southwestern Australia	January through May, annually
Southwest Australia Canyons	Southeast Indian Ocean; southwestern Australia	Year-round

Note: The boundaries and periods of OBIAs will be kept on file in NMFS' Office of Protected Resources and its website at <http://www.nmfs.noaa.gov/pr/permits/incidental/military.htm>.

- (i) **Operational Exception for SURTASS LFA Sound Field in OBIA.** During military operations, SURTASS LFA sonar transmissions may exceed 180 dB re: 1 μ Pa (rms) within the boundaries of an OBIA, including operating within an OBIA, when the Navy determines that it is: 1) operationally necessary to continue tracking an existing underwater contact; or 2) operationally necessary to detect a new underwater contact within the OBIA. This exception does not apply to routine training and testing with the SURTASS LFA sonar systems.
- (j) **Mission Planning.** The Navy must maintain a running calculation/estimation of takes of each species and stocks over the effective period of these regulations. The Navy will plan all SURTASS LFA sonar missions to ensure that no more than 12 percent of any marine mammal species or stock would be taken by Level B harassment annually. This annual per-stock cap of 12 percent applies regardless of the number of SURTASS LFA sonar vessels operating. The Navy must coordinate to ensure that this condition is met for all vessels combined.

III. MONITORING

1. The Navy must perform:

- (a) **Visual Mitigation Monitoring:**
 - (1) Marine mammal biologists qualified in conducting at-sea marine mammal visual monitoring from surface vessels will train and qualify designated ship personnel as lookouts to conduct at-sea visual monitoring. This training may be accomplished either in-person, or via video training.
 - (2) Marine mammal biologists will train the lookouts in the most effective means to ensure quick and effective communication within the ship's command structure to facilitate implementation of protective measures if they observe marine mammals.
 - (3) Conduct visual monitoring from the ship's bridge during all daylight hours (30 minutes before sunrise until 30 minutes after sunset). During activities that employ SURTASS LFA sonar in the active mode,

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the SURTASS vessels shall have lookouts to maintain a topside watch with standard binoculars (7x) and with the naked eye.

(b) **Passive Acoustic Mitigation Monitoring:**

(1) Use the low frequency, passive SURTASS sonar system to listen for vocalizing marine mammals.

(c) **Active Acoustic Mitigation Monitoring:**

(1) Use the HF/M3 active sonar to locate and track marine mammals in relation to the SURTASS LFA sonar vessel and the sound field produced by the SURTASS LFA sonar source array, subject to the ramp-up requirements.

2. Mitigation monitoring under Conditions III.1(a), (b), and (c) must:

(a) Commence at least 30 minutes before the first SURTASS LFA sonar transmission (30 minutes before sunrise for visual monitoring);

(a) Continue between sonar transmissions (pings); and

(a) Continue either at least 15 minutes after completion of SURTASS LFA sonar transmissions (30 minutes after sunset for visual monitoring) or if marine mammals are showing abnormal behavioral patterns, for a period of time until behavior patterns return to normal or conditions prevent continued observations.

3. The Navy must:

(a) Cooperate with NMFS and any other federal agency for monitoring the impacts of the activity on marine mammals; and

(b) Designate qualified on-site individuals to conduct the mitigation, monitoring, and reporting activities specified in this NDE.

4. The Navy will conduct all monitoring required under this NDE to increase knowledge of the affected marine mammal species. The Navy must:

(a) Consider recommendations on the different types of monitoring/research that could increase the understanding of the potential effects of SURTASS LFA sonar transmissions on beaked whales and/or harbor porpoises.

(b) Continue to assess data from the Navy Marine Mammal Monitoring (M3) program and work toward making some portion of that data, after appropriate security reviews, available to scientists with appropriate clearances. Any portions of the analyses conducted by these scientists based on these data that are determined to be unclassified after appropriate security reviews should be made publicly available.

(c) Continue to collect ambient noise data and explore the feasibility of declassifying and archiving the ambient noise data for incorporation into appropriate ocean noise research efforts.

IV. REPORTING

1. **Classified and Unclassified Quarterly Reports.** The Navy must submit classified and unclassified quarterly mission reports to the Director, Office of Protected Resources, NMFS no later than 45 days after the end of each quarter, beginning on the date of effectiveness of this NDE. Each quarterly mission report will include summaries of all active-mode sonar missions completed during that quarter. At a minimum, each classified mission report must contain the following information:

(a) Dates, times, and location of each vessel during each mission.

(b) Information on sonar transmissions during each mission and records of any delays or suspensions.

(c) Location of the SURTASS LFA sonar mitigation and buffer zones in relation to the LFA sonar array.

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- (d) Marine mammal observations including animal type and/or species, number of animals sighted, date and time of observations, type of detection (visual, passive acoustic, HF/M3 sonar), bearing and range from vessel, abnormal behavior (if any), and remarks/narrative (as necessary).
 - (e) The report will include the Navy's estimates of the percentages of marine mammal stocks affected (both for the quarter and cumulatively for the year) by SURTASS LFA sonar military readiness activities (both within and outside the LFA sonar mitigation and buffer zones), using predictive modeling based on mission locations, dates/times of operations, system characteristics, LF A sonar transmission durations, oceanographic environmental conditions, and animal demographics.
 - (f) If no SURTASS LFA sonar missions are completed during a quarter, a report of negative activity will be provided.
2. **Annual Unclassified Report.** The Navy must submit an annual, unclassified report to the Director, Office of Protected Resources, NMFS, no later than 60 days after the annual anniversary of the execution of this NDE. At a minimum, the annual report will contain the following:
- (a) An unclassified summary of the year's quarterly reports.
 - (b) The Navy's estimates of the percentages of marine mammal stocks affected by SURTASS LFA sonar military readiness activities (both within and outside the LFA sonar mitigation and buffer zones), using predictive modeling based on mission locations, dates/times of operations, system characteristics, LFA sonar transmission durations, oceanographic environmental conditions, and animal demographics.
 - (c) An analysis of the effectiveness of the mitigation measures with recommendations for improvements, where applicable.
 - (d) An assessment of any long-term effects from SURTASS LFA sonar military readiness activities a.
 - (e) Any discernible or estimated cumulative impacts from SURTASS LFA sonar military readiness activities.
3. **Status on Marine Mammal Monitoring (M3) Program.** The Navy must provide a status update to NMFS, in proximity to the annual anniversary of the execution of this NDE, on efforts to assess the data collected by the Marine Mammal Monitoring (M3) program and progress toward making some portion of that data, after appropriate security reviews, available to scientists with appropriate clearances. Any portions of the analyses conducted by these scientists based on these data that are determined to be unclassified after appropriate security reviews should be made publicly available. The status update may be submitted with the Navy's annual unclassified report.
4. **Marine Mammal Ship Strike Reporting.** In the event of a ship strike by the SURTASS LFA sonar vessel, at any time or place, the Navy must:
- (a) Immediately, or as soon as clearance procedures allow, report to NMFS the species identification (if known), the size and length of the animal, location (lat/long) of the animal (or the strike if the animal has disappeared), whether the animal is alive or dead (or unknown), including an estimate of its injury status if alive (injured but alive, injured and moving, unknown, etc.).
 - (b) Report the incident to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, at 301-427-8401 and/or by email to Jolie.Harrison@noaa.gov and Dale.Youngkin@noaa.gov.
 - (c) Report as soon as feasible to the NMFS the vessel's name, class/type, and length, as well as operational status, speed and vessel heading.
 - (d) Provide NMFS a photo or video of the struck animal, if equipment is available.
5. **Marine Mammal Stranding Reporting.** During SURTASS LFA sonar military readiness activities personnel onboard a SURTASS LFA vessel shall systematically observe for injured or disabled marine mammals and

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monitor the principal marine mammal stranding networks and other media to correlate analysis of any whale strandings that could potentially be associated with SURTASS LFA sonar activities, the Navy shall:

- (a) Ensure that NMFS is notified immediately, or as soon as clearance procedures allow, if an injured, stranded, or dead marine mammal is observed during or shortly after (within 24 hours) and in the vicinity of any SURTASS LFA sonar activities. The Navy will report the incident to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, at 301-427-8401 and/or by email to Jolie.Harrison@noaa.gov and Dale.Youngkin@noaa.gov.
- (b) Provide NMFS with species or description of the animal(s), the condition of the animal(s) (including carcass condition if the animal is dead), location, time of first discovery, observed behaviors (if alive), and photo or video (if available).
- (c) In the event that personnel onboard a SURTASS LFA vessel observe an injured, stranded, or dead marine mammal during transit, or that is not in the vicinity of, or found during or shortly after SURTASS LFA sonar military readiness activities, the Navy will report the same information to NMFS as listed above as soon as operationally feasible and clearance procedures allow.