

and other related studies/analyses.

Records are retained as follows:

(1) Input/source records are deleted or destroyed after data have been entered into the master file or when no longer needed for operational purposes, whichever is later. Exception: Apply NARA-approved disposition instructions to the data files residing in other DMDC data bases.

(2) The Master File is retained permanently. At the end of the fiscal year, a snapshot is taken and transferred to the National Archives in accordance with 36 CFR part 1228.270 and 36 CFR part 1234.

(3) Outputs records (electronic or paper summary reports) are deleted or destroyed when no longer needed for operational purposes.

**Note:** This disposition instruction applies only to record keeping copies of the reports retained by DMDC. The DOD office requiring creation of the report should maintain its record keeping copy in accordance with NARA-approved disposition instructions for such reports.

(4) System documentation (codebooks, record layouts, and other system documentation) are retained permanently and transferred to the National Archives along with the master file in accordance with 36 CFR part 1228.270 and 36 CFR part 1234.

**SYSTEM MANAGER(S) AND ADDRESS:**

Deputy Director, Defense Manpower Data Center, DoD Center Monterey Bay, 400 Gigling Road, Seaside, CA 93955-6771.

**NOTIFICATION PROCEDURE:**

Individuals seeking to determine whether this system of records contains information about themselves should address written inquiries to the Privacy Act Officer, Headquarters, Defense Logistics Agency, ATTN: DSS-CF, 8725 John J. Kingman Road, Suite 2533, Fort Belvoir, VA 22060-6221.

Written requests should contain the full name, Social Security Number, date of birth, and current address and telephone number of the individual.

**RECORD ACCESS PROCEDURES:**

Individuals seeking access to records about themselves contained in this system of records should address inquiries to the Privacy Act Officer, Headquarters, Defense Logistics Agency, ATTN: DSS-CF, 8725 John J. Kingman Road, Suite 2533, Fort Belvoir, VA 22060-6221.

Written requests should contain the full name, Social Security Number, date of birth, and current address and telephone number of the individual.

**CONTESTING RECORD PROCEDURES:**

The DLA rules for accessing records, for contesting contents and appealing initial agency determinations are contained in DLA Regulation 5400.21, 32 CFR part 323, or may be obtained from the Privacy Act Officer, Headquarters, Defense Logistics Agency, ATTN: DSS-CF, 8725 John J. Kingman Road, Suite 2533, Fort Belvoir, VA 22060-6221.

**RECORD SOURCE CATEGORIES:**

The military services, the Department of Veteran Affairs, the Department of Education, Department of Health and Human Services, from individuals via survey questionnaires, the Department of Labor, the Office of Personnel Management, Federal and Quasi-Federal agencies, and the Selective Service System.

**EXEMPTIONS CLAIMED FOR THE SYSTEM:**

None.

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**BILLING CODE 5001-08-P**

**DEPARTMENT OF DEFENSE**

**Department of the Navy**

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

**AGENCY:** Department of the Navy, Department of Defense.

**ACTION:** Notice of record of decision.

**SUMMARY:** The Department of the Navy, after carefully weighing the operational, scientific, technical, and environmental implications of the alternatives considered, announces its decision to employ two SURTASS LFA sonar systems with certain geographical restrictions and monitoring mitigation designed to reduce potential adverse effects on the marine environment. This decision, which pertains only to the employment of two SURTASS LFA sonar systems (rather than the up to four analyzed in the Final Overseas Environmental Impact Statement and Environmental Impact Statement [OEIS/EIS] for SURTASS LFA Sonar), implements the preferred alternative, Alternative 1, identified in the Final OEIS/EIS for SURTASS LFA Sonar.

Pursuant to 10 U.S.C. 5062, the Navy is required to be trained and equipped for prompt and sustained combat incident to operations at sea. To fulfill this mandate, the Navy provides credible, combat-ready naval forces capable of sailing anywhere, anytime, as powerful representatives of American

sovereignty. Fleet readiness is the foundation of the Navy's war fighting capability, and there is a direct link between fleet readiness and training. For the Navy, fleet readiness means essential, realistic training opportunities, in both open-ocean and littoral environments.

The Navy is facing existing and emerging threats from foreign naval forces. For example, several non-allied nations are fielding new, quiet submarines. New anti-ship, submarine-launched cruise missiles are also being introduced. When quiet submarines and anti-ship cruise missiles are combined, they pose a formidable threat to our sailors and Marines, who are called upon to project power from the sea and maintain open sea lanes.

In order to successfully locate and defend against these threats, our sailors must train realistically with both active and passive sonar. In executing anti-submarine (ASW) missions, sonar is the key to survival for our ships and sailors. The employment of SURTASS LFA will enable the Navy to meet the clearly defined, real-world national security need for improved ASW capability by allowing Navy Fleet units to reliably detect quieter and harder-to-find foreign submarines underwater at long range, thus providing adequate time to react to and defend against the threat, while remaining a safe distance beyond a submarine's effective weapons range.

**SUPPLEMENTARY INFORMATION:** The text of the Record of Decision is provided as follows:

The Department of the Navy (Navy), pursuant to section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. Section 4332(2)(c); the regulations of the Council on Environmental Quality (CEQ) that implement NEPA procedures, 40 CFR parts 1500-1508; 32 CFR part 775; and Presidential Executive Order (EO) 12114 (Environmental Effects Abroad of Major Federal Actions), announces its decision to employ two SURTASS LFA sonar systems with certain geographical restrictions and monitoring mitigation designed to reduce potential adverse effects on the marine environment. This decision, which pertains only to the employment of two SURTASS LFA sonar systems (rather than the up to four analyzed in the Final Overseas Environmental Impact Statement and Environmental Impact Statement [OEIS/EIS] for SURTASS LFA Sonar), implements the preferred alternative, Alternative 1, identified in the Final (OEIS/EIS) for SURTASS LFA Sonar.

## Background

The U.S. and its military forces must have the ability to project power decisively throughout the world. A key to the ability of the U.S. and its military forces to project power is the protection of U.S. and allied forward deployed Naval units against the threat of opposing force submarines. Of the approximately 500 non-U.S. submarines in the world, 224 are operated by non-allied nations. Many of these are the more advanced, quieter diesel-electric submarines that present a real threat to U.S. and allied forces. When these units are in a defensive mode, that is, not required to travel great distances or at high speed, they have a capability nearly equal to that of a modern U.S. nuclear submarine. At minimal cost, this threat potential can be readily obtained.

Where once the U.S. Navy could detect hostile submarines before they could get close enough to launch their weapons, by the 1990's this response time, against the quietest threat, had shrunk to mere minutes. To regain the needed response time and thereby protect our forces, the Navy embarked on an extensive research program to develop new technologies to detect submarines at long ranges. Among the technologies investigated were radar, laser, magnetic, infrared, electronic, electric, hydrodynamic, biologic and sonar (high-, mid- and low frequency). Although no single technology investigated was effective during all tactical and environmental conditions, the most effective and best available technology for reliable long-range detection was Low Frequency Active (LFA) sonar.

LFA sonar is an augmentation to the passive (SURTASS) detection system. Under certain, specific oceanic conditions, passive sonar can provide the detection required. However, under environmental conditions found in many ocean areas, passive sonar cannot detect quiet targets. Therefore, passive systems alone cannot detect quiet, harder-to-find submarines during all conditions, particularly at long ranges.

## SURTASS LFA Sonar System Description

SURTASS LFA sonar is a long-range, all-weather sonar system that operates in the low frequency (LF) band between 100 and 500 Hertz (Hz). It has both active and passive components. The active component of the system, LFA, is a set of 18 low frequency acoustic transmitting source elements (called projectors) suspended by cable from underneath a ship. The source level of

an individual projector is 215 dB. These projectors produce the active sonar signal or "ping." A "ping," or transmission, can last between 6 and 100 seconds. The time between transmissions is typically 6 to 15 minutes. The average duty cycle (ratio of sound "on" time to total time) is between 10 and 20 percent. The SURTASS LFA sonar signal is not a continuous tone, but rather a transmission of waveforms that vary in frequency and duration. The duration of each continuous frequency sound transmission is nominally 10 seconds or less. The signals are loud at the source, but levels diminish rapidly over the first kilometer. The passive, or listening, component of the system is SURTASS, which detects returning echoes from submerged objects, such as threat submarines, through the use of hydrophones on a receiving array that is towed behind the ship. The SURTASS LFA ship maintains a minimum speed of 5.6 kilometers (km) per hour (kph) (3 knots [kt]) through the water to tow the horizontal line hydrophone array.

## Alternatives Considered

In preparing the OEIS/EIS the Navy considered three alternatives, including Alternative 1 (SURTASS LFA sonar employment [up to four systems] with geographic restrictions and monitoring mitigation); Alternative 2 (unrestricted SURTASS LFA sonar employment [up to four systems]); and the No Action alternative. Each alternative was evaluated and compared against the others in terms of fulfillment of the Navy's validated need for reliable detection of quieter and harder-to-find underwater submarines at long range, and the potential for environmental impacts. The word "employment" as used in this context means the use of SURTASS LFA sonar during routine training and testing, as well as the use of the system during military operations. "Employment" does not apply to the use of the system in armed conflict or direct combat support operations, nor during periods of heightened threat conditions, as determined by the National Command Authorities (President and Secretary of Defense or their duly designated alternates or successors).

Alternative 1, which is the Navy's preferred alternative in the Final OEIS/EIS, involves the employment of up to four SURTASS LFA systems with certain geographical restrictions and monitoring mitigation to reduce potential adverse effects on the marine environment. The geographic restrictions include limiting SURTASS LFA sonar received levels to not exceed

145 dB at known recreational or commercial diving sites; limiting SURTASS LFA sonar received levels to below 180 dB within 22 km (12 nm) of all coastlines (including islands) and in areas declared as Offshore Biologically Important Areas (OBIAs); and the use of sound pressure level (SPL) modeling to accurately gauge the 145 dB and 180 dB sound fields prior to commencing operations. The monitoring mitigation includes visual monitoring, the use of passive acoustic monitoring, and use of the high frequency marine mammal monitoring (HF/M3) sonar to detect marine mammals entering or within the 180-dB sound field. (See "Mitigation" below for further details).

Additionally, under this alternative, the Navy's Long Term Monitoring Program (budgeted at a level of \$1M per year for five years, starting with the issuance of the first Letter of Authorization [LOA] by NMFS under the Marine Mammal Protection Act [MMPA]) will provide information to further the understanding of the potential effects of anthropogenic (human-generated) sounds on the marine environment.

Alternative 2 involves the unrestricted operation of up to four SURTASS LFA sonar systems in the active mode. Under this alternative, the Navy would employ these systems with no mitigation measures (*i.e.*, no geographic restrictions or monitoring mitigation to prevent potential effects on marine animals and divers). This alternative would maximize the Navy's operational flexibility and capability to employ SURTASS LFA sonar. However, this alternative has a higher potential to affect the marine environment than the other alternatives.

Under the No Action Alternative, operational employment of SURTASS LFA sonar would not occur. This would foreclose employment of SURTASS LFA sonar technology, and severely impair the Navy's ability to train to locate and defend against enemy submarines. Because the fleet must "train as it fights," this would in turn directly impact Fleet readiness and national security. The lack of a reliable, long-range underwater submarine detection capability would make it possible for potentially hostile submarines to clandestinely place themselves into position to threaten U.S. and allied Fleet units and land-based targets. Without this long-range surveillance capability, the reaction times to submarines would be greatly reduced and the effectiveness of close-in, tactical systems to neutralize threats would be seriously, if not fatally, compromised. Although it is the most environmentally preferable alternative,

the No Action Alternative would not fulfill the need to improve U.S. detection of quieter and harder-to-find underwater submarines at long range.

### Environmental Impacts

The Navy analyzed the potential impacts of the employment of up to four SURTASS LFA sonar systems, with certain geographical restrictions and monitoring mitigation designed to reduce potential adverse effects on the marine environment, in several resource areas. Among the resource areas covered were impacts upon marine mammals, fish and sea turtles, human divers and swimmers, commercial and recreational fishing, whale watching and marine mammal research and exploration activities. This ROD summarizes the potentially significant, but mitigable impacts associated with the decision and the implementation of the selected alternative. The Navy also considered the selected action's potential for indirect effects and cumulative impacts, and ensured consistency with federal policies addressing environmental justice (EO 12898) and protection of children from environmental health and safety risks (EO 13045).

The main areas of impact analysis concerned the potential impact of low frequency sounds upon marine life and human divers. The analytical process utilized in preparation of the OEIS/EIS first conducted a scientific literature review to determine data gaps. Next, scientific screening of marine animal species for potential sensitivity to low frequency underwater sound was undertaken. Following these steps, scientific research and the estimation of the potential for effects from low frequency sound on marine mammals and humans in water was conducted. The research on marine mammals led to the development of a method for quantifying risk to marine mammals. Next, underwater acoustic modeling was conducted. These elements combined to produce an estimation of marine mammal stocks potentially affected. Similar methodologies were used to provide estimations of potential injuries to fish and sea turtles. Finally, geographic restrictions and monitoring mitigation were established to minimize the potential for effects to a negligible level.

Specifically with regard to marine mammals, the analysis of potential impacts contained in the OEIS/EIS was developed based on a literature review, the results of the Navy's Low Frequency Sound Scientific Research Program (LFS SRP) and underwater acoustical modeling. The potential impacts considered were for injury and/or

significant change to biologically important behaviors. Biologically important behaviors are those related to activities essential to the continued existence of a species, such as feeding, migrating, breeding and calving.

Initially, it was determined there was potential for injurious effects within short ranges from the SURTASS LFA sonar. This area was designated as the LFA Mitigation Zone and covers a volume of water ensounded to a level at or above 180 dB (sound pressure level) by the SURTASS LFA sonar transmit array. Under normal operating conditions, this zone will vary between the nominal ranges of 0.75 to 1.0 km (0.40 to 0.54 nm) from the source array ranging over a depth of approximately 87 to 157 m (285 to 515 ft). (The center of the array is at a nominal depth of 122 m [400 ft]).

For the purposes of the SURTASS LFA sonar analyses presented in the Final OEIS/EIS and this ROD, all marine mammals exposed to received levels at or above 180 dB are evaluated as if they are injured. This determination was based on estimations of the range of frequencies at which an animal's hearing is most sensitive and the associated hearing thresholds (including an examination of anatomical models of inner ear function); extrapolation from human exposure results; comparison to fish hearing studies; and recent measurements of levels of temporary threshold shift (TTS) in marine mammals.

For the purposes of the SURTASS LFA sonar analysis presented in the Final OEIS/EIS and this ROD, an animal will have to be within the 180-dB sound field during transmission for injury to occur. The probability of this occurring is negligible because of the visual and acoustic monitoring that will be used whenever the SURTASS LFA sonar is transmitting. (See "Mitigation" below for further details.)

Knowing that cetacean behavioral responses to low frequency sound signals needed to be better defined using controlled experiments, the Navy supported the three-year LFS SRP conducted by independent scientists beginning in 1997. The LFS SRP was designed to supplement the limited scope of data from previous studies. This field research program was based on a systematic process for selecting the marine mammal indicator species (baleen whales were used as indicator species for other marine animals in the studies because they are the animals that are the most likely to have the greatest sensitivity to low frequency sound, have protected status, and have shown avoidance responses to low

frequency sounds) and field study sites, using inputs from several workshops involving a broad group of interested parties (academic scientists, federal regulators, and representatives of environmental and animal welfare groups). Controlled experimental tests were designed and conducted by independent scientists who are recognized experts in the fields of marine mammalogy, marine bioacoustics and underwater acoustics. The LFS SRP involved the following species and settings: Phase I—blue and fin whales feeding in the Southern California Bight (September–October 1997); Phase II—gray whales migrating past the central California coast (January 1998); and Phase III—male humpback whales singing off Hawaii (February–March 1998). The LFS SRP produced new information about responses to low frequency sounds at received levels from 120 to 155 dB. The scientific team explicitly focused on situations that promoted high received levels, but were seldom able to achieve received levels above 155 dB due to the motion of the whales and maneuvering constraints of the low frequency source vessel. Prior to the LFS SRP, the expectation was that whales would begin to show avoidance responses at received levels of 120 dB. Immediately obvious avoidance responses were expected for received levels greater than 140 dB. Although the LFS SRP experiments detected some short-term behavioral responses at estimated received levels between 120 and 155 dB and several behavioral responses were revealed through later statistical analysis, the independent scientists conducting the research concluded that there was no significant change in a biologically important behavior detected in any of the three phases. Most animals that did respond returned to normal baseline behavior within a few tens of minutes. The modeled underwater acoustic received levels, which were calculated in the Final OEIS/EIS subsequent to the LFS SRP, have demonstrated that the range of exposure levels for subject animals during the LFS SRP covered a significant portion of the received level range that will be expected during actual SURTASS LFA sonar operations.

To estimate the percentage of marine mammal stocks potentially affected on a yearly basis under the selected alternative, the typical annual SURTASS LFA sonar operating schedule was correlated to 31 acoustically modeled sites. Conservative predictions from the modeling of the annual estimates of percentages of marine mammal stocks potentially

affected by SURTASS LFA sonar operations in the Pacific/Indian Oceans and Atlantic Ocean/Mediterranean Sea are given in the Final OEIS/EIS. Since marine mammal stocks are reproductively isolated, decreases in one stock cannot be replaced by animals from other stocks. Therefore, to accurately assess the potential effect of SURTASS LFA sonar, each stock was examined independently.

Under the selected alternative, the potential impact on any stock of marine mammals from injury is considered negligible, and the potential effect on the stock of any marine mammal from significant change in a biologically important behavior is considered minimal. However, because there is some potential for incidental takes, the Navy is requesting a Letter of Authorization (LOA) under the MMPA for each SURTASS LFA sonar system from NMFS for the taking of marine mammals incidental to the employment of SURTASS LFA sonar during training, testing and routine military operations. The Final Rule for issuance of the LOA for SURTASS LFA operations was published on 16 July 2002. In the Final Rule the National Marine Fisheries Service (NMFS) determined that employment of SURTASS LFA as described in Alternative 1 of the OEIS/EIS and implemented in this ROD will have negligible impacts on the species and stocks of marine mammals and will not have an unmitigable adverse impact on the availability of such marine mammals for subsistence uses. Additionally, NMFS considers the unintentional takes to be "small numbers of marine mammal species or population stocks."

The Navy has also consulted with NMFS under Section 7 of the ESA concerning the possible incidental taking of listed species, including marine mammals, sea turtles, and fish. In a Biological Opinion dated 30 May 2002, NMFS indicated that employment of the SURTASS LFA sonar as described by Alternative 1 of the Final OEIS/EIS and implemented by this ROD may adversely affect, but is not likely to jeopardize the continued existence of affected endangered and threatened species.

Regarding impacts to fish, the risk of physical harm or injury from exposure to SURTASS LFA sonar transmissions will be no greater than that for marine mammals. Several factors support this finding. First, coastal waters, OBAs and recreational dive sites commonly contain significant concentrations, abundances and diversity of fish stocks, and geographic restrictions imposed on the SURTASS LFA sonar system

employment limits received levels to no greater than 145 dB at known recreational and commercial dive sites and below 180 dB within 22 km (12 nm) of any coastline and in offshore biologically important areas. Based on prior studies, it is reasonable to consider hearing loss or injury to fish from SURTASS LFA sonar transmissions to be limited to received levels of 180 dB and higher. Thus, areas of high fish abundance and diversity will not be exposed to levels of LFA sounds that could potentially cause injury. Second, the SURTASS LFA sonar signal has a narrow bandwidth (approximately 30 Hz) whereas most fish species have much wider hearing bandwidths, which minimizes the potential for masking important regions of fish hearing bandwidth. Third, given that the SURTASS LFA sonar ship is always moving and that the system has a low system duty cycle (20 percent or less), fish will spend little time in the LFA mitigation zone. Finally, the LFA mitigation zone is small relative to fisheries resource regions and open ocean fish habitats. In any event, because only two SURTASS LFA sonar systems will be employed under this ROD, any potential for impacts to fish is less than for the four systems analyzed in the Final OEIS/EIS.

Pelagic fish are food for many marine mammals. If these prey species were within the 180-dB sound field of the SURTASS LFA sonar during source transmission (no more than 20 percent of the time), they could potentially be indirectly affected. However, it is unlikely that prey availability for marine mammals would be altered for more than a few hours. Based on the analyses of potential effects on fish, the potential for injury to fish on a stock level is negligible.

Sea turtle encounters with SURTASS LFA sonar will be limited and not significant due to the same factors described above for fish. Thus, it is unlikely that a significant portion of any sea turtle stock will experience adverse effects on movements, migration patterns, breathing, nesting, breeding, feeding, or other normal behaviors. In any event, because only two SURTASS LFA sonar systems will be employed under this ROD, any potential for impacts to sea turtles is less than for the four systems analyzed in the Final OEIS/EIS. Moreover, given that sea turtles are comparable in size to a small marine mammal, the visual monitoring and active acoustic monitoring employed under the implemented alternative will further reduce the risk of sea turtles encountering the SURTASS LFA sonar system.

Because data regarding the effects of underwater low frequency sound on humans were limited, the Navy conducted two scientific research studies to analyze the potential effects of low frequency sound on human divers. This research, in conjunction with guidelines developed from psychological aversion testing, led to the conclusion that low frequency sounds at or below 145 dB received level would not have an adverse effect on recreational or commercial divers. The Naval Submarine Medical Research Laboratory then established a 145-dB received level criterion for recreational and commercial divers, which has been endorsed by both the Navy's Bureau of Medicine and Surgery and the Naval Sea Systems Command.

Impacts on human divers, swimmers, surfers, snorkelers, and others that may submerge themselves below the ocean's surface will not be significant. Several factors support this conclusion. First, geographic restrictions imposed on SURTASS LFA sonar system employment limits received levels to no greater than 145 dB at known recreational and commercial dive sites. Second, exposure to low frequency sound energy will be eliminated or greatly reduced at beaches that are separated from the open ocean by a land mass (barrier island) or beaches along a broad, shallow portion of the continental shelf. Third, other than for very short periods of time, swimmers, surfers, and snorkelers are located at depths not greater than 2 m (6.5 ft), where substantial sound transmission losses occur in the top layer of water (up to 20 dB less than sound fields in adjacent deeper water). Also, as noted earlier, only two SURTASS LFA sonar systems will be employed under this ROD, so any potential impacts to divers are less than for the four systems analyzed in the Final OEIS/EIS.

Under the selected alternative, there will be negligible impacts on fish (as discussed previously) and, hence, negligible impact on commercial and recreational fishing in marine waters, fisheries trade, or related employment.

There will be no significant impacts on whale watching activities as a result of the employment of SURTASS LFA sonar, primarily because of the geographic restrictions imposed on SURTASS LFA sonar operations, which are designed to avoid areas of high concentrations of marine mammals. Thus, operations will not occur in prime whale watching areas.

Employment of the system and implementation of the selected alternative will not result in potential adverse impacts to existing

governmental, commercial, or academic research and exploration activities. SURTASS LFA sonar sound fields will not exceed 145 dB within known recreational and commercial dive sites, which includes blue water (open ocean) dive sites related to oceanic research. Many research and exploration activities are conducted from vessels under the University National Oceanographic Laboratory System (UNOLS), which cooperates with the Navy on a continuous basis. In addition, data from the Navy's proposed Long Term Monitoring Program can be used to supplement ongoing and future oceanographic and marine environmental research endeavors.

The potential cumulative impact issue associated with SURTASS LFA sonar operations is the addition of underwater sound to oceanic ambient noise levels, which, in turn, could have impacts on marine animals. Analysis of the potential cumulative impacts requires a discussion of recent changes to ambient sound levels in the world's oceans; the operational parameters of the SURTASS LFA sonar system, including the required mitigation; and the contribution of SURTASS LFA sonar to oceanic noise levels relative to other human-generated sources of oceanic noise. As noted in the Final OEIS/EIS, since 1950 oceanic ambient noise levels have risen by as much as 10 dB, mostly due to commercial shipping. Two SURTASS LFA sonars can transmit sound into the ocean for a total maximum of 36 days per year versus a total of 21.9 million days per year for the 60,000 vessels of the world's merchant fleet (assuming 80 percent of the merchant ships are at sea at any one time). Therefore, within the existing environment, the potential for accumulation of noise in the ocean by the intermittent operation of SURTASS LFA sonars is considered negligible.

Any cumulative impacts on fish (including sharks), sea turtle or marine mammal stocks from implementation of the selected alternative are a long-term issue, and are estimated to be extremely small because the system will transmit for a relatively brief period of time on an annual basis (estimated maximum of 432 hours per vessel per year); the system will operate at a low duty cycle (on no more than 20 percent of the time); and the system will not be stationary. In any event, because only two SURTASS LFA sonar systems will be employed under this ROD, any potential for impacts is less than for the four systems analyzed in the Final OEIS/EIS. Moreover, all observations made during the LFS SRP suggest that behavioral effects terminate when

transmissions stop. Thus, the maximum scale on which any impacts are likely to occur is a nominal 30-day operational at-sea mission.

#### Mitigation

All practicable means to avoid or minimize environmental harm have been adopted through the incorporation of mitigation measures into operation of the SURTASS LFA sonar. The objective of these mitigation measures is to avoid injury to marine mammals and sea turtles near the SURTASS LFA sonar source and to recreational and commercial divers in the marine environment. Mitigation measures involve both geographic restrictions and operational measures. Geographic restrictions include limiting the SURTASS LFA sonar-generated sound field to a maximum of 145 dB (received level) in the vicinity of known recreational or commercial dive sites; limiting the SURTASS LFA sonar-generated sound field to below 180 dB (received level) within 22 km (12 nm) of any coastlines (including islands) and in offshore areas outside this zone that have been determined to be Offshore Biologically Important Areas (OBIA's); and estimating SURTASS LFA sound pressure levels prior to and during operations to provide the information necessary to modify operations, including the delay or suspension of transmissions, in order not to exceed the 145-dB and 180-dB sound field criteria.

Additionally, monitoring will take place during operations to prevent injury to marine animals. This monitoring will take three forms. First, visual monitoring for marine mammals and sea turtles will be conducted from the vessel during daylight hours by personnel trained to detect and identify marine mammals and sea turtles. Monitoring will begin 30 minutes before sunrise for ongoing missions or 30 minutes before SURTASS LFA sonar is deployed and continue until 30 minutes after sunset or until the SURTASS LFA sonar have been recovered. Second, passive acoustic monitoring using the SURTASS array will listen for sounds generated by marine mammals as an indicator of their presence when SURTASS is deployed. Finally, active acoustic monitoring will take place using the High Frequency Marine Mammal Monitoring (HF/M3) sonar, which is a Navy-developed, enhanced high frequency commercial sonar to detect, locate, and track marine mammals that may pass close enough to the SURTASS LFA sonar's transmit array to enter the 180-dB sound field (LFA mitigation zone). HF/M3 sonar monitoring will begin 30 minutes before

the first SURTASS LFA sonar transmission of a given mission is scheduled to commence and continue until transmissions are terminated. Whenever a marine mammal or sea turtle is detected within the LFA mitigation zone (180-dB sound field) or within the 1-km buffer zone beyond the LFA mitigation zone (interim operational restriction per NMFS Final Rule), the Officer in Charge will order the immediate delay or suspension of SURTASS LFA sonar transmissions, until the animal is determined to have moved beyond the buffer zone.

The startup of the HF/M3 sonar will involve a ramp-up from a source level of approximately 180 dB to ensure there is no inadvertent exposure of local animals to received levels 180 dB and above. If the operating area is found to be clear, the source level will be increased in 10-dB steps until full power (if required) is attained, at which time the operator will adjust the HF/M3 sonar controls as necessary to optimize system performance. The HF/M3 sonar and its operating protocols were designed to minimize potential effects on marine animals.

The HF/M3 sonar operates with a similar power level (220 dB), signal type and frequency (30 to 40 kHz) as high frequency "fish finder" type sonars used worldwide by both commercial and recreational fishermen. The HF/M3 sonar is located near the top of the SURTASS LFA sonar vertical line array. Its computer terminal for data acquisition, processing and display is located in the SURTASS Operations Center. The general characteristics of the HF/M3 sonar are provided in the Final OEIS/EIS.

Analysis and testing of the HF/M3 sonar operating capabilities indicate that this system substantially increases the probability of detecting marine mammals that may pass close enough to the SURTASS LFA sonar's transmit array to enter the 180-dB sound field (LFA mitigation zone) and provides excellent monitoring capability (particularly for medium to large marine mammals) beyond the LFA mitigation zone, in the 1-km buffer zone. The system's ability to detect marine mammals of various sizes has been verified in several sea trials. Recent testing of the HF/M3 sonar, as documented in the Final OEIS/EIS, has demonstrated a probability of detection above 95 percent within the LFA mitigation zone for most marine mammals.

#### Long Term Monitoring (LTM) Program

The LTM program consists of two parts. First are NMFS-directed reports

under the Final Rule. These reports will provide the necessary information for assessments of whether any taking of marine mammals occurred within the SURTASS LFA mitigation zone during operations based upon data from the monitoring mitigation (visual, passive acoustic, active acoustic). Data analysis from the LTM and post-operation acoustic modeling will provide post-mission estimates of any incidental harassment takes. The second part of the LTM program involves long-term independent scientific research efforts on topics designed to fill data gaps and further the overall understanding of the effects of anthropogenic sound and noise on the marine environment. While the Navy believes that the research and analyses contained in the Final OEIS/EIS are sufficient to permit informed decision-making regarding the employment of SURTASS LFA sonar, it believes that it would be prudent to continue research. The LTM program has been budgeted by the Navy at a level of \$1M per year for 5 years, starting with the issuance of the first LOA.

During routine operations of SURTASS LFA sonar, technical and environmental data will be collected and recorded. These will include data from visual and acoustic monitoring, ocean environmental measurements, and technical operational inputs. As part of the LTM Program and as stipulated in the MMPA Final Rule/LOA, the following reports are required. First, a mission report will be provided to NMFS on a quarterly basis with the report including all active-mode missions that have been completed 30 days or more prior to the date of the deadline for the report. Second, the Navy will submit an annual report to NMFS no later than 90 days prior to expiration of an LOA. Finally, the Navy is required to provide a final comprehensive report analyzing any impacts of SURTASS LFA sonar on marine mammal stocks during the 5-year period of the regulations.

#### Summary of Public Involvement

The public participation program for the OEIS/EIS began with publication of a Notice of Intent (NOI) to prepare an EIS in the Federal Register (FR) on July 18, 1996. Three public scoping meetings were held in August 1996 to determine the scope of issues to be addressed by the OEIS/EIS. In addition to conducting the public participation program, the Navy invited representatives of concerned environmental groups, or non-governmental organizations, to an outreach meeting held on January 8, 1997 in Washington, DC. Three additional meetings were held between

February 1997 and June 1998. The purpose of these meetings was to provide interested parties with detailed briefings on SURTASS LFA sonar and to exchange views on the EIS process and content. The outreach meetings provided significant input to the OEIS/EIS development.

The Navy also organized a Scientific Working Group (SWG) on "The Potential Effects of Low Frequency Sound on the Marine Environment." The SWG provided a forum for scientific discourse among Navy and non-governmental organizations to address the underlying scientific issues needing resolution for development of the OEIS/EIS. Group members included representatives from the Navy, the National Marine Fisheries Service, the Marine Mammal Commission, several leading universities, several leading marine research institutions, and an observer from the League for Coastal Protection, who represented the public environmental community. The SWG met three times and was responsible for designing the LFS SRP, which provided critical research on the impacts of low frequency sounds upon marine mammals. The results from the LFS SRP were key factors driving the development and conclusions of the OEIS/EIS.

On July 31, 1999, copies of the Draft OEIS/EIS were distributed to agencies and officials of federal, state, and local governments, citizen groups and associations, and other interested parties (FR Vol. 64 No. 146). Documents produced for the SURTASS LFA Sonar Draft OEIS/EIS were also made available for review at 17 public libraries located in many coastal states, including Hawaii.

A 90-day public review and comment period on the Draft OEIS/EIS ended on October 28, 1999. During this period, three public hearings were held on the Draft OEIS/EIS with notifications published in the **Federal Register** on September 14, 1999 (FR Vol. 64 No. 177) and in local newspapers. Over 1,000 comments were received on the Draft OEIS/EIS, covering federal, state, regional, and local agencies, groups and associations, and private individuals. All oral and written comments received were considered in the preparation of the Final OEIS/EIS.

On January 19, 2001, copies of the Final OEIS/EIS were distributed to agencies and officials of federal, state, and local governments, citizen groups and associations, and other interested parties (FR Vol. 66 No. 23). The Final OEIS/EIS was also made available for review at 17 public libraries located in many coastal states, including Hawaii.

The SURTASS LFA Sonar OEIS/EIS Internet Web site (<http://www.surtass-lfa-eis.com>) will be available for information purposes until 60 days after publication of the ROD in the **Federal Register**.

#### Comments on the Final OEIS/EIS

The Navy received eleven comment letters on the Final OEIS/EIS, including one comment from the U.S. Environmental Protection Agency (USEPA), six comments from individuals, and four from non-governmental organizations. Comments received were considered when preparing this ROD.

The USEPA in its comments on the Draft OEIS/EIS recommended that information from the NMFS biological opinion be included in the Final OEIS/EIS. As the biological opinion was not completed when the Final OEIS/EIS was published, in comments on the Final OEIS/EIS the USEPA similarly requested that the Navy clearly define the mitigation measures in the ROD based on the biological opinion. This information has been provided in this document.

Six comment letters were received from individuals. Responses to issues raised in four of the letters were adequately addressed in the Final OEIS/EIS and/or the NMFS Final Rule. The comments of another individual, which primarily concerned diver issues, were addressed in sufficient detail in the Final OEIS/EIS and Technical Report Number 3 (Summary Report on the Bioeffects of Low Frequency Waterborne Sound). The comments of Mr. K. C. Balcomb, which primarily concerned the Bahamas stranding and the potential for injury to marine mammals from resonance, have been addressed in this document under the discussion concerning the requests for the Navy to do a supplemental EIS and were addressed in the NMFS Final Rule.

The Cape Cod Commercial Hook Fisherman's Association, Inc., raised concerns about impacts that active sonar will have on the New England groundfishery. The potential for impacts from SURTASS LFA sonar to fish and commercial/recreational fishing was addressed in the Final OEIS/EIS. Under the selected alternative, there will be negligible impacts on commercial and recreational fishing in marine waters, fisheries trade, or related employment.

The Navy received two letters from the Natural Resources Defense Council (NRDC) (letters of 31 May 2001 and 4 February 2002) and one from Earth Island Institute (EII) (letter of 27 September 2001) stating that since the Final SURTASS LFA Sonar OEIS/EIS

was published in January 2001 significant new information relevant to environmental concerns and bearing on the Final OEIS/EIS analysis and conclusions has been developed. These letters further requested that the Navy prepare a supplemental EIS (SEIS) based on the matters presented. Under CEQ regulations governing NEPA, Federal agencies are required to prepare an SEIS when there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts (40 CFR 1502.9(c)(1)).

First, the letters have suggested that there is a potential for non-auditory physiological impacts on marine mammals, induced by acoustic resonance of the LFA signal in the bodies of animals. They also suggest that resonance can cause serious physical injury or death at far lower acoustic intensities and over a much wider range of impact than the Navy has heretofore calculated.

In response to the resonance issue raised by these letters and comments to NMFS Proposed Rule, Cudahy and Ellison (2002) analyzed the potential for injury related to resonance from SURTASS LFA signals. Their analysis does not support the claim that resonance from LFA sonar will cause injury. Physical injury due to resonance will not occur unless it will increase stress on tissue to the point of damage. Therefore, the issue is not whether resonance occurs in air/gas cavities, but whether tissue damage occurs. Cudahy and Ellison (2002) indicate that the potential for in vivo tissue damage to marine mammals from exposure to underwater low frequency sound will occur at a damage threshold on the order of 180 to 190 dB or higher. These include: (1) Transluminal (hydraulic) damage to tissues at intensities on the order of 190 dB or greater; (2) vascular damage thresholds from cavitation at intensities in the 240–dB regime; (3) tissue shear damage at intensities on the order of 190 dB or greater; and (4) tissue damage in air-filled spaces at intensities above 180 dB.

In a workshop held April 24 and 25, 2002, an international group of 32 scientists with backgrounds in acoustics met at NMFS Headquarters in Silver Spring, Maryland, to consider the question of acoustic resonance and its possible role in tissue damage in marine mammals. The group concluded that it is not likely that acoustic resonance in air spaces plays a primary role in tissue damage in marine mammals exposed to intense acoustic sources. Tissue displacements are too small to cause damage, and the resonant frequencies of

marine mammal air spaces are too low to be excited by most sounds produced by humans. Resonance of non-air containing tissues was not ruled out. While tissue trauma from resonance in air spaces seems highly unlikely, the group agreed that resonance in non-air containing tissues cannot be considered negated until certain experiments are performed. (PersComm with Dr. Roger L. Gentry, Workshop Organizer, NMFS Office of Protected Resources, 14 May 2002)

In summary, the best available scientific information shows that, while resonance can occur in marine animals, this resonance does not necessarily cause injury, and any such injury is not expected to occur below a sound pressure level of 180 dB. Because the Draft and Final OEIS/EISs used 180 dB as the criterion for the determination for the potential for injury to marine life and for the implementation of geographic and monitoring mitigation measures, any non-auditory physiological impacts associated with resonance were accounted for. The 145–dB restriction for known recreational and commercial dive sites will provide an additional level of protection to marine animals in these areas. Based on this analysis, I have concluded that this claim does not constitute significant new information relevant to the employment of SURTASS LFA sonar that would require an SEIS.

Additionally, it has been claimed that air space resonance impacts will cause damage to the lungs and large sinus cavities of cetaceans, that LFA sound could induce panic and subsequent problems with equalization, and that LFA sonar could cause bubble growth in blood vessels. With regard to the specific impacts to lungs and sinus cavities, there is abundant anatomical evidence that marine mammals have adapted to dramatic fluctuations in pressure. For example, marine mammal lungs are reinforced with more extensive connective tissues than their terrestrial relatives. These extensive connective tissues, combined with the probable collapse of the alveoli at the depths at which significant SURTASS LFA signals can be heard, make it very unlikely that significant lung resonance effects could be realized. Based on this analysis, I have concluded that this claim does not constitute significant new information relevant to the employment of SURTASS LFA sonar that would require an SEIS.

Regarding the issue of equalization (or more correctly—decompression), it is likely that marine mammals, which have evolved in an ambient hydrostatic pressure environment spanning several

orders of magnitude [ $1:10^3$ ], would be pre-disposed to have an innately rugged physiology for handling pressure changes and are unlikely to have problems with decompression. Therefore, it is unlikely that they would experience these problems. Based on this analysis, I have concluded that this claim does not constitute significant new information relevant to the employment of SURTASS LFA sonar that would require an SEIS.

One of the letters (NRDC, 4 February 2002) cited a 2001 paper, which building on a theoretical model advanced in a paper published in 1996, hypothesizes that intense, low-frequency sound could spur the growth of nitrogen bubbles in diving animals and result in embolism, hemorrhaging, and decompression sickness. According to the paper, marine mammals whose bodies are already saturated or supersaturated with nitrogen—a condition induced in at least some species by diving—could be especially vulnerable to such injuries. The NRDC letter alleges that the potential for debilitating injury resulting from this process was not addressed by the Navy in its final EIS for the LFA system.

The papers referred to above are “Acoustically Enhanced Bubble Growth at Low Frequencies and Implication for Human Diver and Marine Mammal Safety” by L.A. Crum and Y. Mao in the *Journal of the Acoustical Society of America* (1996), and “Can Diving-induced Tissue Nitrogen Supersaturation Increase the Chance of Acoustically Driven Bubble Growth in Marine Mammals?” by D. S. Houser, R. Howard, and S. Ridgway in the *Journal of Theoretical Biology* in 2001. The “bubble growth” issue as presented in Crum and Mao (1996) was discussed in the Final OEIS/EIS based on comments concerning possible effects on divers, even though that paper is also relevant to marine mammals. Both papers raised concerns regarding the potential for low frequency sound (note: in both papers, the authors considered “low frequency” to be below 5,000 Hz; the SURTASS LFA Sonar Final OEIS/EIS, by contrast, defined “low frequency” as below 1,000 Hz) to cause bubble growth from saturated and supersaturated gases in the blood (similar to the human diver condition known as the bends). Crum and Mao (1996), whose analysis was peer reviewed, concluded that sound pressure induced bubble growth would not be of concern until the sound pressure level exceeded 190 dB. Houser et al. (2001) hypothesized that due to their dive profiles, beaked and sperm whales could have high supersaturation of gases in their blood and tissues at or

near the end of their dive cycles (at or near the surface). At these high levels of supersaturation, the primary factor in producing bubble growth is static diffusion, which is not induced by sound pressure. Because the SURTASS LFA sonar monitoring mitigation measures will prevent marine mammals from being exposed to sound levels of 180 dB and above within the LFA mitigation zone, marine mammals will not be exposed to sound levels that could cause bubble growth due to supersaturation. Additionally, since high levels of supersaturation of gases in the tissue and blood are a normal part of marine mammal diving behavior, it must also be assumed that marine mammals have evolved mechanisms to deal with bubble growth by this method. Further, this evolutionary process has included marine mammal exposure to loud sound pressure levels from their own vocalizations and from others in the diving pod. Based on this analysis, I have concluded that this claim does not constitute significant new information relevant to the employment of SURTASS LFA sonar that would require an SEIS.

Further, it is claimed there is a general correlation between naval maneuvers (which may include active sonar) and other mass strandings and multi-species strandings associated with beaked whales. The stranding information provided in the letters has been analyzed by both the Navy and NMFS. Based on this analysis, I have concluded that this claim does not constitute significant new information relevant to the employment of SURTASS LFA sonar that would require an SEIS.

It has also been asserted that the interim report on the Bahamas stranding event (DoC and SECNAV, 2001) provides significant new information. For the following reasons, I have concluded that it does not.

First, as the report notes, SURTASS LFA sonar was not involved in the Bahamas stranding, and it has been confirmed that SURTASS LFA sonar has never been associated with any strandings. Second, the LFS SRP made systematic evaluations of the animals most likely to be potentially affected by low frequency sound. While beaked whales, the primary species that stranded in the Bahamas, may be sensitive to frequencies above that employed by SURTASS LFA sonar, the available evidence does not show that they are more sensitive to low frequency sounds than the species selected as subjects for the LFS SRP (baleen whales).

Finally, the interim report on the Bahamas stranding concluded that the cause of this stranding was the confluence of the Navy mid-range frequency sonar and contributory factors including the presence of a strong surface duct, unusual underwater bathymetry, constricted channel with limited egress, intensive active use of multiple sonar units over an extended period of time, and the presence of beaked whales that appear to be sensitive to the frequencies produced by these sonars.

In addition to the geographic restrictions and monitoring mitigation protocols required for the proposed action (Alternative 1), the Navy will apply interim operational restrictions required by NMFS in the Final Rule that include a maximum frequency of 330 Hz and a 1-km buffer zone outside of the LFA mitigation zone. Taken as a whole, these protocols and SURTASS vessel maneuvering restrictions (due to the length of the acoustic arrays) will preclude employment in narrow channels surrounded by land such as those in the Bahamas.

The letters have also asserted, in light of the interim Bahamas stranding report that resonance may have had an impact that caused the strandings, that the 180-dB threshold for injury is suspect for marine mammals, that baleen whales may also have stranded in the incident, and that the treatment of the incident in the Final EIS was dismissive.

Possible impacts associated with resonance were discussed earlier. The Navy does not agree that the interim Bahamas stranding report raises doubts about using 180 dB as the basis for determining injury with respect to the SURTASS LFA Sonar Final OEIS/EIS. The Final OEIS/EIS provides detailed discussions supporting the selection of 180 dB as the scientifically reasonable criterion for the potential onset of injury to marine mammals, and are not repeated here. In addition, research published after the Final OEIS/EIS was issued has strengthened this selection. Au and Andrews (2001) measured humpback whale calls off Hawaii at 189 dB; the average call source level for blue whales was calculated by McDonald et al. (2001) to be 186 dB; Charif et al. (2002) found source levels for fin whales up to 186 dB; and Møhl et al. (2000) recorded source levels for sperm whale clicks up to 223 dB. If marine mammals vocalize at these levels, it is reasonable to conclude that these species have also evolved mechanisms to protect themselves and conspecifics from high vocalization source levels.

Two minke whales, which are baleen whales, stranded in the Bahamas, but in

a different geographical area than the beaked whales. The minke whales returned to deep water and were not reported to re-strand, so no information about the cause or causes of their strandings is available.

Based on the analysis discussed above, I have concluded that claims associated with the interim Bahamas stranding report do not constitute significant new information relevant to the employment of SURTASS LFA sonar that would require an SEIS.

One of the letters claimed that the Final OEIS/EIS failed to discuss the cumulative or synergistic effects of operation of the SURTASS LFA sonar system in the same area with other low-frequency active sonar systems employed by other countries. All low frequency range active sonar systems used by other nations that the Navy is aware of are above 1 kHz, except for the SACLANTCEN (NATO) TVDS system. The NATO TVDS system has both mid- and low-frequency components with frequency ranges of 2.8 to 3.3 kHz and 450 to 700 Hz, respectively (SACLANTCEN, 1998). The U.S. Navy does not intend to operate SURTASS LFA sonar with this NATO system. I have concluded that the potential for SURTASS LFA sonar to operate with other low frequency systems is unlikely and, therefore, this claim does not constitute significant new information relevant to the employment of SURTASS LFA sonar that would require an SEIS.

One letter also alleged that the Final OEIS/EIS failed to adequately discuss the use of new and advanced passive sonar technologies—such as Advanced Deployable Systems, towed arrays equipped with Acoustic Rapid Commercial-off-the-shelf Insertion (ARCI) processing, Robust Passive Sonar (RPS), and other systems—which have the potential to achieve the strategic goal of locating “quiet” submarines. As stated in the Final OEIS/EIS, LFA “is an augmentation to the passive (SURTASS) detection system, and is planned for use when passive performance is inadequate.” Under certain conditions, such as areas of high ambient (background) noise (e.g., high shipping density), passive sonar cannot detect quiet targets. Therefore, passive systems alone cannot meet the Navy’s requirement to detect quiet, harder-to-find submarines during all conditions, particularly at long ranges. Passive sonar technologies, such as the Advanced Deployable System (ADS), were discussed in the Final OEIS/EIS and also in the Final Rule. Additionally, SURTASS LFA sonar will have ARCI as its processor. Therefore, I have

concluded that this claim does not constitute significant new information relevant to the employment of SURTASS LFA sonar that would require an SEIS.

Finally, one letter suggested that the Navy prepare an SEIS because the Final OEIS/EIS analysis relied heavily on behavioral audiograms obtained on bottlenose dolphins for its analysis of auditory impacts rather than the newly reported alternative, electro-physiological method (auditory brainstem response) for measuring hearing loss in marine mammals. The letter stated that results indicate that hearing loss in bottlenose dolphins may occur to a greater degree and possibly at lower levels of exposure than had been presumed using behavioral techniques.

The auditory brainstem response (ABR) method referenced in the letter was used to measure temporary threshold shift (TTS), not to measure hearing loss. Additionally, an abstract received from the principal investigator on the referenced research states, "Following the collection of the evoked auditory potential thresholds, the dolphin's thresholds were also reexamined using a conventional standard behavioral psychophysical procedure. The data show very similar thresholds using the two different procedures" (PersComm with Dr. P.E. Nachtigall, 11 February 2002). Thus, the Navy's analysis in the Final OEIS/EIS remains valid. Furthermore, the Navy did not rely primarily on behavioral audiograms obtained on bottlenose dolphins in the Final OEIS/EIS for the analysis of auditory impacts. The subject study by Schlundt *et al.*, (2000) was only one set of data used to estimate the potential effects on marine mammal hearing, which included marine mammal hearing thresholds, extrapolation from human hearing loss studies, temporary threshold shift studies, and comparison to fish hearing studies. Therefore, I have concluded that this claim does not constitute significant new information relevant to the employment of SURTASS LFA sonar that would require an SEIS.

NMFS received several comments under their Proposed Rulemaking regarding the Navy's Final OEIS/EIS. The Navy has worked closely with NMFS in responding to these comments, which have been incorporated into NMFS Final Rule for the Taking of Marine Mammals Incidental to Navy Operations of SURTASS LFA Sonar (**Federal Register** July 16, 2002). In making the decision regarding employment of the SURTASS LFA sonar system, the Navy has fully considered the responses to comments

within the NMFS Final Rule for the Taking of Marine Mammals Incidental to Navy Operations of SURTASS LFA Sonar.

#### Other Considerations

On June 10, 2002, the General Accounting Office (GAO) completed an investigation into the Defense Acquisition of the SURTASS LFA Sonar and issued a report (GAO-02-692) entitled, "Testing Needed to Prove SURTASS/LFA Effectiveness in Littoral Waters." This exhaustive examination concluded that the primary benefit of SURTASS LFA sonar is that it will provide a significant increase in long-range undersea detection capabilities in the open ocean, with fewer assets and operators than other technologies, thus, validating the purpose as defined in the SURTASS LFA Sonar Final EIS. In its singular recommendation, GAO stated that the Navy should establish a test plan and conduct testing of the system to demonstrate its capabilities in littoral areas, which they defined as coastal, near-shore regions. Future testing pursuant to this decision will include testing in the littorals. Therefore, I have concluded that this report does not provide any significant new information relevant to the employment of SURTASS LFA sonar that would require an SEIS.

In a recent article (Croll, D.A., C.W. Clark, A. Acevedo, B. Tershy, S. Flores, J. Gedamke, and J. Urban. 2002. "Bioacoustics: Only male fin whales sing loud songs." Brief Communications, *Nature* 417: 809), the authors concluded, ". . . the recovery of fin- and blue-whale populations from past exploitation could be impeded by low-frequency sounds generated by human activity." These low-frequency vocalizations are considered to be breeding displays by males. They also stated, "An increase in ambient noise could thus reduce the distance over which receptive females might hear the vocalizations of males." One of the coauthors, Dr. Chris Clark of Cornell University, was a principal investigator on the LFS SRP and a preparer/reviewer of the Final OEIS/EIS. He has stated that the low frequency contribution to ambient noise of greatest concern is from commercial shipping. He also stated that SURTASS LFA sonar does not contribute to ambient noise in the frequency band of fin whale and blue whale songs (below 100 Hz). Further, the information presented in Croll *et al.* (2002) was known during the preparation of and is consistent with the conclusions of the SURTASS LFA Final OEIS/EIS. Therefore, I have concluded that this article does not provide any

significant new information relevant to the employment of SURTASS LFA sonar that would require an SEIS.

#### Conclusions

I have considered the following issues relative to the potential environmental impacts from the employment of the SURTASS LFA sonar system including, but not limited to, adequacy of scientific information on human divers and the Navy sponsored research to study the potential effects of low frequency sound on divers to fill these gaps; adequacy of scientific information on marine animals and the Low Frequency Sound Scientific Research Program conducted by independent bioacousticians and marine biologists; development of impact criteria including risk continuum and thresholds; analytical methodology, analyses, and results of the determination of potential impacts; the NOAA/Navy Joint Interim Report Bahamas Marine Mammal Stranding Event of 15-16 March 2000 as it relates to the potential for SURTASS LFA sonar to cause tissue damage/injury to marine mammals; resonance and bubble growth issues as they relate to the potential for SURTASS LFA sonar to cause tissue damage/injury to marine animals; NMFS Final Rule for the Taking of Marine Mammals Incidental to Navy Operations of Surveillance Towed Array Sensor System Low Frequency Active Sonar and their response to comments received on the Proposed Rule; NMFS Biological Opinion on the Navy's Proposed Employment of Surveillance Towed Array Sensor System Low Frequency Active Sonar; comments received on the SURTASS LFA Sonar Final OEIS/EIS; and requests from environmental groups for the Navy to prepare a supplemental EIS based on significant new information.

Based upon my review of the comparative analysis of the potential for environmental and socioeconomic effects from the three alternatives presented in the Final OEIS/EIS and public comments received during the NEPA process, I have decided to implement Alternative 1 of the Final OEIS/EIS, which was identified as the Navy's preferred alternative, with certain geographical restrictions and monitoring mitigation designed to reduce potential adverse effects on the marine environment, but only to employ two SURTASS LFA sonar systems rather than the four systems analyzed under Alternative 1. Only two SURTASS LFA sonar systems will be available during the next five years. There is no budget identified for any further SURTASS LFA sonar systems through fiscal year 2007. This decision permits the Navy 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 monitoring mitigation requirements constitute all practical means to avoid or minimize environmental harm from the alternative selected. In addition, this decision and implementation of this alternative provide for continued long-term monitoring and research, which will further enhance the understanding of the potential effects of anthropogenic sounds on the marine environment.

Actions requiring issuance of NMFS Letter(s) of Authorization (LOA[s]) are being addressed through NMFS rulemaking under 50 CFR part 216 and the Final Rule (**Federal Register**, 16 July 2002). Actions requiring issuance of incidental take statements (ITS[s]) are being addressed as part of the NMFS Biological Opinion on the U.S. Navy's proposed use of SURTASS LFA Sonar that has been prepared by NMFS in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Consultation No. F/FPR/2000/00483, dated 30 May 2002).

Operational employment of the SURTASS LFA sonar system onboard the R/V Cory Chouest is contingent upon issuance of a LOA for that system, which the Navy anticipates being issued with an effective date of 15 August 2002 (30 days after the Final Rule is published in the **Federal Register**), in specific bio-geographic provinces approved for operations. Operational employment is also contingent upon issuance of an ITS concurrent with the above LOA and for the same specified bio-geographic provinces.

Operational employment of the second SURTASS LFA sonar system is contingent upon issuance of a LOA and ITS for that system, in specified bio-geographic provinces approved for operation. The LOA and ITS for this system will be requested by the Navy in accordance with the above regulations when appropriate.

Dated: July 16, 2002.

**Donald R. Schregardus,**

*Deputy Assistant Secretary of the Navy,  
(Environment).*

[FR Doc. 02-18592 Filed 7-22-02; 8:45 am]

**BILLING CODE 3810-FF-P**

## DEPARTMENT OF EDUCATION

### Notice of Proposed Information Collection Requests

**AGENCY:** Department of Education.

**SUMMARY:** The Acting Leader, Regulatory Information Management Group, Office of the Chief Information Officer, invites comments on the proposed information collection requests as required by the Paperwork Reduction Act of 1995.

**DATES:** Interested persons are invited to submit comments on or before September 23, 2002.

**SUPPLEMENTARY INFORMATION:** Section 3506 of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires that the Office of Management and Budget (OMB) provide interested Federal agencies and the public an early opportunity to comment on information collection requests. OMB may amend or waive the requirement for public consultation to the extent that public participation in the approval process would defeat the purpose of the information collection, violate State or Federal law, or substantially interfere with any agency's ability to perform its statutory obligations. The Acting Leader, Regulatory Information Management Group, Office of the Chief Information Officer, publishes that notice containing proposed information collection requests prior to submission of these requests to OMB. Each proposed information collection, grouped by office, contains the following: (1) Type of review requested, e.g. new, revision, extension, existing or reinstatement; (2) Title; (3) Summary of the collection; (4) Description of the need for, and proposed use of, the information; (5) Respondents and frequency of collection; and (6) Reporting and/or Recordkeeping burden. OMB invites public comment.

The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology.

Dated: July 17, 2002.

**William Burrow,**

*Acting Leader, Regulatory Information Management, Office of the Chief Information Officer.*

### Office of Educational Research and Improvement

*Type of Review:* Revision of a currently approved collection.

*Title:* Early Childhood Longitudinal Study: Birth Cohort/24 month followup.

*Frequency:* Other: one-time.

*Affected Public:* Individuals or household (primary), Businesses or other for-profit, Not-for-profit institutions.

*Reporting and Recordkeeping Hour Burden:*

Responses: 29644.

Burden Hours: 23114.

*Abstract:* The Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) is a nationally representative longitudinal study of children born in the year 2001. The 24 month followup represents the second round of data collection for members of this cohort. Children are assessed using state of the art assessment tools, parents are interviewed as well as child care providers. Together with the Kindergarten component of this early childhood studies program, the survey informs the research and general community about children's health, early learning, development and education experiences. The focus of this survey is on characteristics of children and their families that influence children's first experiences with the demands of formal schools as well as early health care and in- and out-of-home experiences.

Requests for copies of the proposed information collection request may be accessed from <http://edicsweb.ed.gov>, by selecting the "Browse Pending Collections" link and by clicking on link number 2092. When you access the information collection, click on "Download Attachments" to view. Written requests for information should be addressed to Vivian Reese, Department of Education, 400 Maryland Avenue, SW., Room 4050, Regional Office Building 3, Washington, DC 20202-4651 or to the e-mail address [vivian\\_reese@ed.gov](mailto:vivian_reese@ed.gov). Requests may also be electronically mailed to the internet address [OCIO\\_RIMG@ed.gov](mailto:OCIO_RIMG@ed.gov) or faxed to 202-708-9346. Please specify the complete title of the information collection when making your request.

Comments regarding burden and/or the collection activity requirements should be directed to Kathy Axt at (540) 776-7742. Individuals who use a telecommunications device for the deaf