U.S. NAVY SURVEILLANCE TOWED ARRAY SENSOR SYSTEM LOW-FREQUENCY ACTIVE SONAR TRAINING AND TESTING

DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT/ OVERSEAS ENVIRONMENTAL IMPACT STATEMENT

June 2025
www.nepa.navy.mil/surtass-lfa/
ID# SEIS-007-17-USN-1727716941

Introduction

The Department of the Navy has prepared the Surveillance Towed Array Sensor System Low-Frequency Active (SURTASS LFA) Sonar Training and Testing Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (SEIS/OEIS). The Draft SEIS/OEIS includes an analysis of the potential environmental effects associated with at-sea training and testing (collectively referred to as "military readiness activities") of the SURTASS LFA sonar in the western North Pacific and Indian Oceans (referred to as "Study Area") (Figure 1).

The SEIS/OEIS is an update to the Navy's 2019 SEIS/Supplemental OEIS (SOEIS) and earlier environmental analyses to assess potential environmental effects of proposed training and testing activities in the Study Area. Examples of new information and changes from the 2019 SEIS/SOEIS include:

- Research published since the 2019 analysis;
- New analytical methods to calculate behavioral and auditory effects on marine mammals; and
- Updated marine mammal densities.

Military Readiness Activities

Navy Sailors must be ready to respond to any situation that may arise, ranging from engaging in large-scale conflict, to providing humanitarian assistance and disaster relief, to conducting maritime security operations (e.g., protecting international shipping, deterring piracy, providing port and harbor security, fighting drug smuggling).

Training and Testing with Sonar

Adversaries of the United States have and continue to acquire modern, quiet submarines that can pose serious threats to national security, the safety of military forces, and the nation's economy. Sonar proficiency is complex and requires regular, hands-on training in realistic and diverse conditions. Lack of realistic training jeopardizes the lives of military personnel serving in dangerous waters as well as in actual combat situations. The Navy uses simulators for some types of training; however, simulators cannot completely replace training and testing in a realistic environment. Active sonar is the most effective method of detecting, identifying, and tracking underwater threats, including quiet submarines and in-water mines.

To meet the requirement for improved capability to detect quieter and harder-to-find foreign submarines at greater distances, the Navy developed and uses SURTASS LFA sonar. SURTASS LFA sonar is a long-range system that transmits in the low-frequency band (below 1,000 Hertz) that is composed of both active and passive components. The active component is the LFA sonar source array while the passive component is the SURTASS receive array.

The Navy will seek the issuance of federal regulatory permits and authorizations under the Marine Mammal Protection Act and Endangered Species Act to support training and testing activities within the Study Area and will comply with other applicable federal, state, and local laws and regulations.

Importance of At-Sea Training

Seventy percent of the earth is covered in water, 80 percent of the planet's population lives in proximity to coastal areas, and 90 percent of global commerce is conducted by sea. The priorities of the Department of the Navy are to maintain open navigable seas, provide world-wide humanitarian support in crises, deter aggression, and win decisively in war. The Navy must train Sailors in realistic environments in preparation to defend the United States and its territories, allies, and interests.

Importance of At-Sea Testing

The Navy research, acquisition, and testing community includes research organizations, laboratory facilities, and testing centers. This community researches, develops, acquires, and evaluates weapons, systems, manned and unmanned aircraft, surface ships, submarines, unmanned underwater vehicles, and other specialized technologies which give U.S. military personnel a technological advantage over potential adversaries. Testing activities must be conducted at sea to ensure these technologies perform as designed and expected in the environment where they will be relied upon by the Navy.

The Navy uses active sonar to prepare Sailors to successfully counter hostile threats. Active sonar is the most effective method of detecting modern, quieter submarines.

Study Area

The Study Area for SURTASS LFA sonar training and testing activities includes the non-polar areas of the western and central North Pacific and eastern Indian Oceans, not including the western Indian Ocean or Sea of Okhotsk. The Study Area for this SEIS/OEIS is the same as the 2019 SEIS/SOEIS. Vessels operating SURTASS LFA sonar would only train and test outside of 12 nautical miles from land.

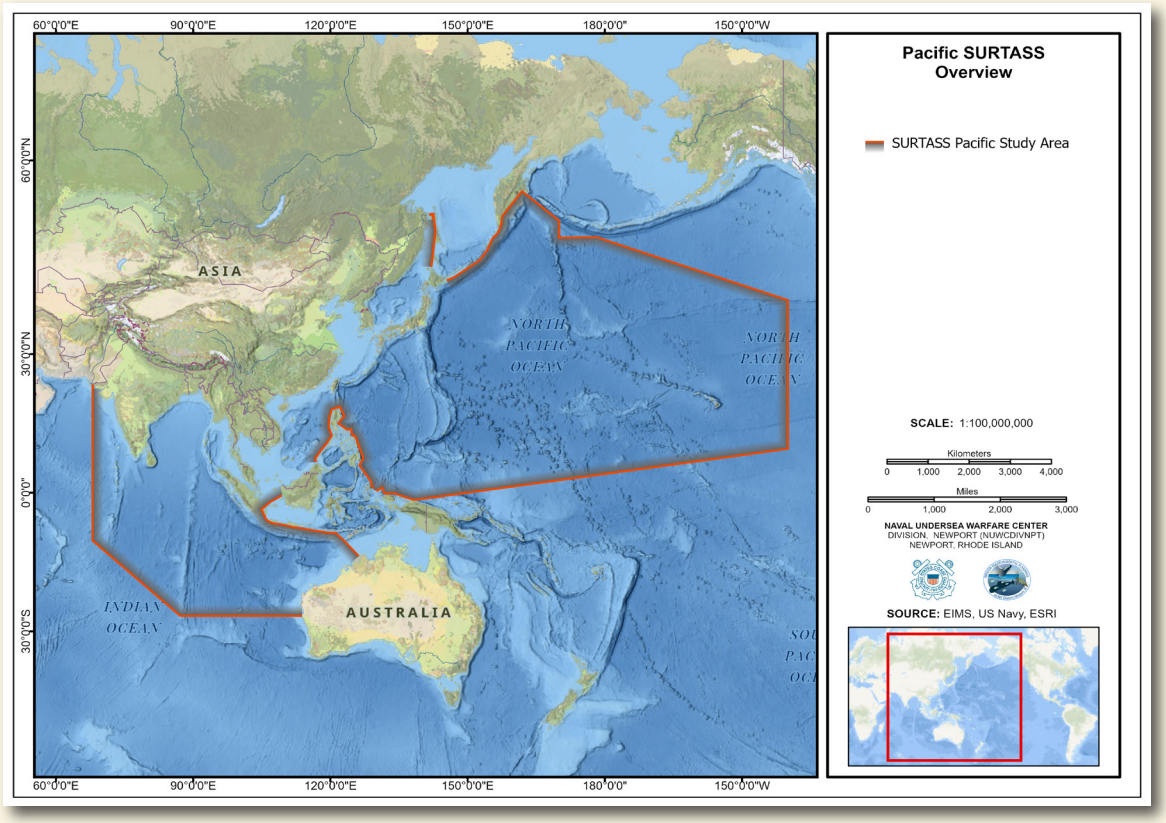

Figure 1. Study Area for the Pacific SURTASS LFA Sonar Systems in the non-Arctic Areas of the Western and Central North Pacific and Eastern Indian Oceans.

The National Marine Fisheries Service (NMFS) is a cooperating agency on this SEIS/OEIS. NMFS is a cooperating agency because of its expertise and regulatory authority over marine resources. As a cooperating agency, NMFS subject matter experts review sections related to potential effects on marine mammals and other protected marine species. Additionally, after independent review, NMFS may adopt the SEIS/OEIS to fulfill its NEPA obligations for the rule-making process under the Marine Mammal Protection Act.

Proposed Action

The Proposed Action is to continue employing SURTASS LFA sonar systems onboard U.S. Navy surveillance ships for routine training and testing activities of SURTASS LFA sonar at sea in support of military readiness. Proposed military readiness activities are similar to those analyzed in the 2019 SEIS/SOEIS and earlier SURTASS LFA environmental documentation. Training and testing activities include the use of low-frequency active sonar while employing marine species protective mitigation measures.

Alternatives Analyzed

The Draft SEIS/OEIS includes an analysis of a No Action Alternative and two action alternatives:

No Action Alternative: The Proposed Action would not occur, and the SURTASS LFA sonar training and testing activities would be discontinued in August 2026. No further activities would occur. The Navy's purpose and need would not be met since its ability to train and test to locate and defend against enemy submarines would be greatly impaired.

Alternative 1 (Preferred Alternative): A total of 1,100 hours of LFA sonar transmissions are planned per year for training activities. This total includes all SURTASS LFA sonar equipped vessels stationed in the Study Area and would cover training activities for four operational vessels.

Alternative 1 is identified as the Navy's Preferred Alternative to meet the purpose of and need for the Proposed Action

Alternative 2: A maximum of 2,490 hours of LFA sonar transmission are planned per year for training and testing activities. This total includes all SURTASS LFA sonar equipped vessels stationed in the Study Area and would represent an increased number of active LFA sonar training hours above the baseline provided in Alternative 1, as well as hours needed for qualification testing of one new SURTASS LFA-equipped vessel per year. This increase assumes a need for additional SURTASS LFA sonar equipped vessels to be operational in the Study Area, based on training requirements or a change in geopolitics. It is possible that two of the new vessels being tested annually could be added to the fleet as opposed to replacing existing vessels, meaning the total number of vessels in the Study Area would be a maximum of six.

Resources Evaluated

The Navy evaluated the reasonably foreseeable effects the Proposed Action may have on the human, natural, and cultural environments, including:

- Acoustic marine environment
- Fishes
- Sea turtles
- Marine mammals
- Marine protected habitats
- Economic resources

The Draft SEIS/OEIS also includes an analysis of measures that would avoid, minimize, or mitigate environmental effects potentially resulting from training and testing activities.

The purpose of the Proposed Action is to conduct military readiness activities in the Study Area to ensure the Navy is able to train service members and personnel. The Proposed Action is needed to maintain a system and crews capable of detecting at long ranges the increasingly technologically advanced foreign submarine presence that threatens national security.

Cumulative Effects

The Proposed Action would contribute incremental effects on the ocean ecosystem. In general, it is not anticipated that the implementation of the Proposed Action would have a meaningful contribution to the ongoing stress or cause significant collapse of any marine resource, but it would have minimal impacts on resources that are already experiencing various degrees of interference and degradation.

The implementation of mitigation measures would reduce the potential effects of the Proposed Action and would ensure that effects do not become cumulatively significant to any resource.

Acoustic Marine Environment

Use of SURTASS LFA sonar would increase noise over a narrow low-frequency range within the Study Area. These increases would only occur during use of and relatively near the source itself and would be negligible. Sonar transmissions are intermittent, occurring over a period of hours. Due to the large size of the Study Area, acoustic transmissions would not be localized to one area but would be spread widely throughout.

Biological Resources (Fishes, Sea Turtles, Marine Mammals)

Exposure of marine fishes, sea turtles, and marine mammals to noise from SURTASS LFA sonar systems could result in behavioral reactions (startle, alarm, avoidance), masking (when the presence of a noise interferes with a species' ability to hear biologically important sounds), or temporary threshold shift (a reversible shift in an animal's hearing sensitivity) by individual animals, but would not have any population level impacts. Auditory effects, such as auditory injury, on marine mammals could occur; however, exposures would be infrequent and are not expected to result in long-term population-level impacts.

Marine Protected Habitats

SURTASS LFA sonar would be introduced for a short period of time, only temporarily increasing the ambient (background) noise levels within marine protected habitats. There would be no potential for loss or destruction of marine habitats due to use of SURTASS LFA sonar. Marine protected habitats would return to their previous conditions after SURTASS LFA sonar transmissions have stopped. Implementation of mitigation measures would limit acoustic energy present in protected habitats.

Economic Resources

SURTASS LFA sonar transmissions would not limit economic use of the Study Area, such as fisheries, recreational and commercial diving, and whale watching. With implementation of mitigation measures, other recreational uses of the Study Area would also not be limited.

National Environmental Policy Act Process

The National Environmental Policy Act (NEPA) is a U.S. law that requires federal agencies to identify and analyze the potential environmental effects of a proposed action before deciding whether to proceed with that action. The law encourages and facilitates public involvement to inform decision makers on actions that may affect the community or the environment.

Photo Credit: NOAA/NMFS/Pacific Islands Fisheries Science Center Blog 2015-09-11

Public Involvement

Public involvement is a fundamental aspect of the NEPA process, and there are opportunities for the public to participate in the development of the SEIS/OEIS. Public input is welcomed, valued, and appreciated.

Public and agency input allows decision makers to consider community concerns and benefit from local knowledge. The public participates in the NEPA process during the following stages:

- **Scoping Period:** Help to identify concerns, potential effects, relevant effects of past actions, and possible alternative actions.
- **Draft SEIS/OEIS Public Review and Comment Period:** Evaluate and provide substantive comments on the analysis of the Proposed Action and alternatives.
- **Final SEIS/OEIS 30-Day Wait Period:** Review the Final SEIS/OEIS and Navy responses to the substantive comments received on the Draft SEIS/OEIS.
- **Record of Decision**: Become informed of the explanations for the Navy's decision and plans for mitigation and monitoring.

Notice of Intent to Prepare an SEIS/OEIS Aug. 21, 2024
Scoping Comment Period Aug. 21, 2024 – Sept. 19, 2024
Notice of Availability of the Draft SEIS/OEIS June 13, 2025
Draft SEIS/OEIS Public Review and Comment Period June 13, 2025 – July 28, 2025
Notice of Availability of the Final SEIS/OEIS April 2026
30-Day Wait Period April 2026
Record of Decision July 2026

Opportunity for Public Review and Comment Under NEPA

Opportunity for Public Review Under NEPA

Figure 2. NEPA Process.

Environmental Protection at Sea

The Navy is committed to avoiding, reducing, or minimizing effects on the marine environment from at-sea activities. Mitigation measures are established and adhered to with the aim of reducing effects on resources. Requirements for training and testing activities at sea include, but are not limited to:

- Establishing activity-based mitigation, including:
  - ***Visual observation*** of marine mammals and sea turtles in the LFA mitigation zone by qualified Lookouts from the SURTASS LFA sonar vessels during daylight hours.
  - ***Passive acoustic monitoring*** using the passive SURTASS towed array to listen for sounds generated by marine mammals as an indicator of their presence.
  - ***Active acoustic monitoring*** 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 and, to some extent, sea turtles, that pass close enough to the SURTASS LFA sonar's transmit array to enter the LFA mitigation zone.
- Delaying SURTASS LFA sonar transmissions or suspending ongoing transmissions if the Navy detects a marine mammal or sea turtle entering or already located within the LFA mitigation zone.
- Maneuvering vessels, such as reducing speed, to maintain distance from observed marine species.
- Implementing geographic mitigation areas with seasonal or year-round restrictions.

As part of the analyses, the Navy will continue to assess potential impacts of SURTASS LFA sonar systems on offshore biologically important areas. Effectiveness of the protective mitigation measures that are the foundation of the Navy's training and testing with SURTASS LFA sonar will also be re-assessed in the context of new technologies and methodologies as well as operational practicability.

How to Participate

Submitting Comments

The public is invited to review the Draft SEIS/OEIS and provide substantive comments on the Proposed Action and the environmental analysis. The Navy is accepting comments from June 13 to July 28, 2025.

Substantive comments will be considered under NEPA and may be submitted via the project website at **www.nepa.navy.mil/surtass-lfa/** or by mail to:

U.S. Pacific Fleet Readiness Division
Attention: SURTASS LFA SEIS/OEIS Project Manager N46
250 Makalapa Drive
Pearl Harbor, HI 96860-3131

Comments must be postmarked or received online by **11:59 p.m. HST on July 28, 2025 (7:59 p.m. ChST on July 29, 2025)**, for consideration in the Final SEIS/OEIS.

Virtual Public Meetings

The Navy is holding two virtual public meetings, consisting of a presentation and question-and-answer session. Questions concerning the Draft SEIS/OEIS will be accepted in advance before **July 7, 2025**, via the question form on the project website. Questions may also be submitted in writing during the meetings. Please note that questions submitted as part of the question-and-answer session are not considered official public comments. Visit **www.nepa.navy.mil/surtass-lfa/** for more information and to attend a virtual public meeting.

Hawaii	Mariana Islands
Tuesday, July 8, 2025 12 to 1 p.m. HST	Wednesday, July 9, 2025 8 to 9 a.m. ChST
Monday, July 14, 2025 4 to 5 p.m. HST	Tuesday, July 15, 2025 12 to 1 p.m. ChST