

SSC Pacific Launches Software to Guarantee Compliance With Range Operating Permit

Sonar Permit Administration & Management Software Simplifies Sonar Use Recordkeeping

PERSONNEL FROM THE Environmental Readiness Division of the Space and Naval Warfare Systems Center Pacific (SSC Pacific) have developed software to better track sonar usage and ensure compliance with its range operating permits—the Sonar Permit Administration and Management (SPAM) tool.

The use of active sonar and other types of underwater acoustic emissions is an important tool for the Navy for carrying out its mission. Sonar and underwater acoustic emissions are

used during training will not harm marine mammals, the Navy works with the National Marine Fisheries Service (NMFS) and complies with guidelines set forth by the Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA).

In Southern California, these guidelines are have been incorporated into the Hawaii-Southern California Training and Testing (HSTT) Environmental Impact Statement (EIS)/Overseas Impact Statement (OEIS), a document that analyzes all potential

LOA, issued in December 2013, provides each System Command (SYSCOM) with an allotted annual number of sonar hours over a five-year period.

This interactive tool provides an organized, online record of sonar usage so that SSC Pacific can ensure compliance with the LOA and keep a running track of how many hours have been used.

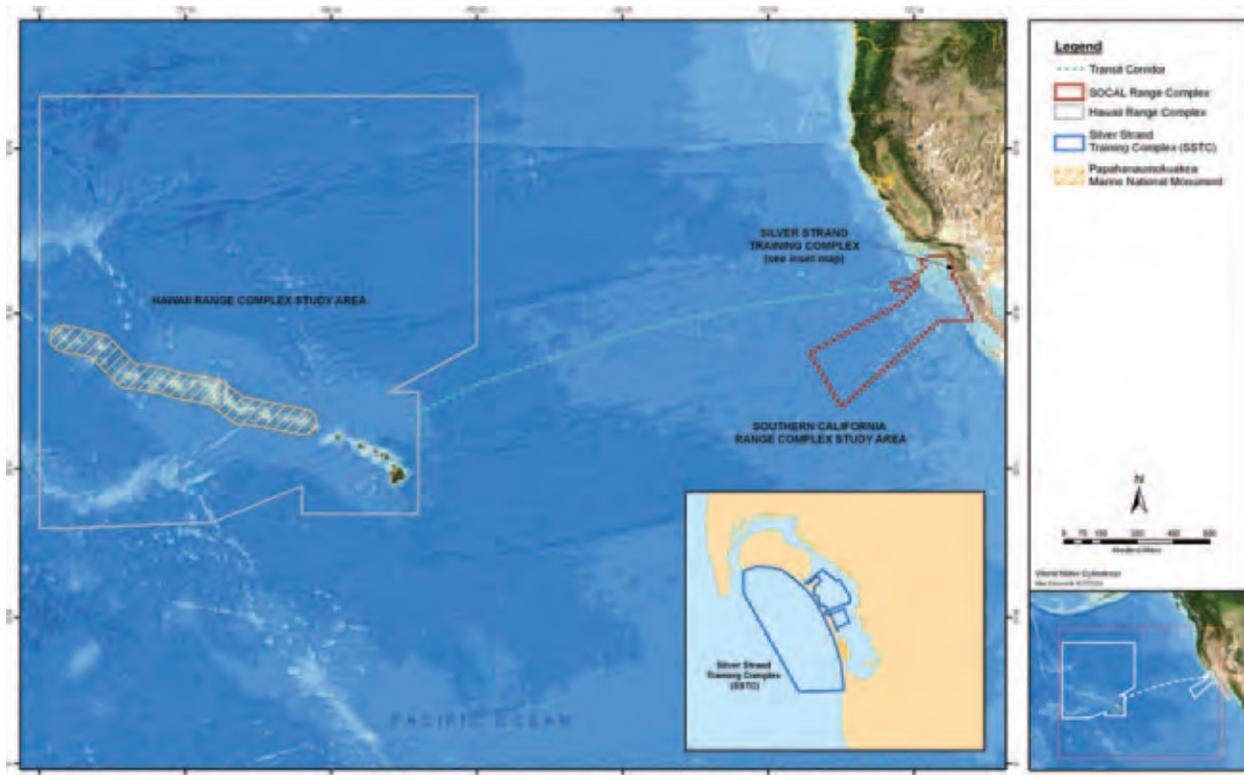


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used for detecting today's ultra-quiet electric submarines, underwater mines navigating unmanned underwater vehicles to sending information and communicating underwater with acoustic modems. To assure that sonar

environmental impacts for the various forms of training and testing that take place within the HSTT study area. The EIS stipulates the limits/requirements of sonar use, and these are set forth in a Letter of Authorization (LOA). The

Along with the number of hours of sonar used by the command, SPAM collects information such as type of sonar, test location, any materials to be expended during the test, other technologies and equipment to be



The Hawaii-Southern California Training and Testing range.

used such as lasers or towed equipment. SPAM then provides the end-user with the required mitigation measures to be implemented during the test. All of this information is organized within the SPAM tool. The Sharepoint Site that hosts SPAM also provides to the end users access to the Marine Species Awareness

Training (MSAT) video, sonar log templates, and other reference information.

The SPAM tool resides on a SharePoint Site within the Secret IP Network (SIPR) at SSC Pacific. The tool was programmed in Microsoft Access and has built-in

Lookout Training

FOR MOST AT-SEA operations and pier side testing in HSTT, a trained lookout is required. Lookouts are required to complete MSAT annually—a two-part video training program approved by NMFS. The training focuses on marine mammals and sea turtles and provides information on indicators of marine mammal and sea turtle presence, such as floating vegetation, aggregations of fish or jellyfish near the surface, and diving seabirds. It discusses the use of all available sensors and optical systems. The MSAT video is available on the 564 Blog.



A marine wildlife biologist scans for marine mammal activity aboard the guided-missile destroyer USS Mahan (DDG 72).
MC1 Class Daniel Gay



A sonar technician at work aboard the guided-missile destroyer USS Mustin (DDG 89).

MC2 Declan Barnes

functions such as drop down lists and radial buttons to help the end-user quickly navigate the tool. The tool categorizes sonar sources by frequency, source level and the application in which the source would be used. Each SPAWAR project has a folder on the Sharepoint Site where its project-specific information is stored and archived. SPAM has categorized all sonar sources and

provides specific instructions to the end-user which sources must be logged and what mitigation measures must be implemented.

SPAM also incorporates other at-sea testing requirements that involve vessel movement and/or deployment of towed equipment. Certain seasonal and geographical

Defining Harassment

THE MARINE MAMMAL Protection Act defines two broad forms of animal “harassment.”

Level A harassment includes any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild. Injury, as defined in the HSTT EIS/OEIS, is “the destruction or loss of biological tissue from a marine mammal. The destruction or loss of biological tissue will result in an alteration of physiological function that exceeds the normal daily physiological variation of the intact tissue.” Generally speaking, this means any injury that doesn’t result in mortality.

Level B harassment for military readiness activities is defined as “any act that disturbs or is likely to disturb a marine mammal or marine mammal stock by causing disruption of natural behavioral patterns including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering to a point where such behaviors are abandoned or significantly altered.”

The modifiers “abandoned” or “significantly altered” are key to this definition. The EIS states that a “momentary behavioral reaction of an animal to a brief, time-isolated acoustic event” does not qualify as MMPA Level B harassment.

restrictions are also in place, and these are reflected in the SPAM tool and user's guide as well.

To complete the sonar reporting process with SPAM, a user follows a three-step process.

Step One: Request to Operate

Three or more weeks prior to an at-sea test, the Test Lead will download a "request to operate" form from the SIPR SharePoint site in their respective project's shared documents folder. The user completes the form, filling in information about time, date, duration, and type of equipment used. The user then uploads the completed form back to the site.

sources are not anticipated to result in harassment or harm of protected species and are categorized as de minimis or exempt. This means that they do not require documentation of transmission times and locations. This is all tracked and accounted for in SPAM for the end users.)

The Test Lead should be sure to review the required mitigation measures before the test, and print out copies of the log form, which is used to record information during the test. If the test lead or other test personnel have not already completed MSAT, it is hosted on the SharePoint site and they can take it when processing their request.

the amount of hours used on the test does not exceed the number of hours approved.

Automatic Data Compilation

After the closeout ticket has been processed, the number of hours utilized go into the SYSCOM database in which they are added to the hours used by other commands and uploaded into Sonar POSitional Reporting System (SPORTS). (Note: The Navy developed SPORTS to capture its official record of underwater sound sources used under its MMPA permits.) From this database, quarterly reports can be generated, giving any command within HSTT an

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Step Two: Approval to Operate

Environmental readiness personnel will review the request to ensure it is covered by SSC Pacific's activity descriptions in the EIS and sonar allocations. If it is an approval to operate is issued to the end-user within five working days. The applicant will be notified by email, and the approval ticket will be found in the project's document folder. The ticket will authorize the Test Lead to conduct the at-sea operations, provide instructions on how to record the actual at-sea sonar usage, define the required mitigation measures, and discuss how to close out the ticket after the at-sea test concludes. (Note: Some sonar

Step Three: Closeout Ticket

The closeout ticket is created by clicking on the "Enter Sonar Usage" button on the Request to Operate page. All data recorded on the log form(s) during the test must be transferred to the SPAM tool within five days of the test date. Use of de minimis sonar sources only does not require a closeout ticket.

During the Test

Utilizing the log forms downloaded from SPAM, participants should enter hours requested, hours used, latitude and longitude of usage, on/off times, stop reason, and equipment platform. It is the responsibility of the Test Lead to insure that

overview of how many allotted hours have been used and remain. This ensures that the SYSCOMs are able to track their collective sonar usage to ensure compliance with the LOA.

The Navy is a world leader in research to assess, monitor and mitigate the effects of sound on marine mammals. SPAM is the newest tool in the Navy's arsenal to assure that essential Navy training and native marine life can continue to coexist in the oceans of the world. 

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