NAVY

Hawaii-Southern California
Training and Testing EIS/OEIS

Marine Resources, Protective Measures and Research

Protecting Marine Resources.

The coastal and sea areas of Hawaii and Southern California are important to those who use these resources for subsistence, commercial or recreational purposes. These areas are home to a vast array of marine plants and animals, including whales, dolphins, porpoises, seals, sea lions, turtles, fish and birds.

These areas are also important to the U.S. Navy because of the established ranges where members of the armed forces learn and practice the skills required to respond to an emergency or to a national security threat. In addition, these areas are suitable and necessary for testing new and existing weapons systems in environments where the weapons will be used.

The Navy strives to protect the marine environments of Hawaii and Southern California. The Navy has programs in place to care for the environment and continually improves these programs as it learns more.

The Navy's Ongoing Protective Measures.

Navy policy is to operate in full compliance with environmental laws. The Navy recognizes the need to protect marine life while conducting training and testing activities that are vital to fulfilling its national defense mission. Working with the National Marine Fisheries Service (NMFS), the Navy has developed a sophisticated set of procedures and tools based on the best available science to minimize effects of training and testing on the ocean environment. Navy personnel aboard ships are required and thoroughly trained to follow these procedures.

Pre-exercise monitoring

Many marine mammals vocalize underwater and are visible when on the ocean surface. Prior to using active sonar, Navy personnel scan the area visually and with passive sonar to detect the presence of marine mammal and sea turtles.

Posting highly trained lookouts

To qualify as a Navy shipboard lookout, personnel must complete a Marine Species Awareness Training program, which was developed with NMFS. This extensive training gives lookouts the skills to detect objects or activity in the water that could potentially be a marine mammal. At least three Navy lookouts are posted on each ship at all times when it is underway. An additional two dedicated marine mammal lookouts are posted during training with active sonar.

Safety zones for marine species

During active sonar training, if a marine mammal is detected within 1,000 yards, the vessel will reduce sonar transmission power. The vessel will further reduce sonar power if a marine mammal is detected within 500 yards. If a marine mammal is detected within 200 yards of the sonar dome, the ship will shut down its active sonar transmissions.

Conducting safe navigation

While in transit, Navy vessel operators are alert at all times for objects in their path; use extreme caution; operate at a speed consistent with mission and safety; and take proper action if there is a risk of collision with a marine animal.

Reporting sightings

The Navy works closely with NMFS, including reporting any marine mammal sightings during major training and testing exercises and coordinating with NMFS in the event of a stranding.

CONTINUED ON BACK PAGE

Applying the Latest Science and Technology.

The National Environmental Policy Act process gives the Navy an opportunity to review and assess its activities, ensuring that the benefits of recent scientific and technological advances are applied toward analyzing potential environmental effects. As part of this process, scientists compile and analyze all currently available data and research with a focus on understanding species distribution, abundance and movement patterns, as well as the potential effects from underwater activities. Examples of available information include:

Assessments of Marine Resources

These assessments provide comprehensive reviews of marine species distribution derived from sighting and survey data, peer-reviewed literature and NMFS reports, including stock assessments and recovery plans. Specific reports exist for the Hawaiian Islands and Southern California training and testing areas.

Density and Abundance Estimates

Statistical tools allow the estimation of marine species density and abundance based on analysis of shipboard and aerial survey data. This information has been calculated for the Hawaii and Southern California study areas.

Scientific Literature and Study Results

Results of research focused on animal hearing and diving physiology, behavioral responses to human-generated sound and understanding the potential effects of sound in the water is available in peer-reviewed scientific journals.

Sound Propagation and Effects Modeling

Sound energy travels much better in the sea than it does in air. Mathematical tools have been developed to model how sound propagates (travels) through an ocean that has variable conditions. The results of these models indicate whether this propagation could lead to any potential effects or lack of effects on different marine species.

Preventing Marine Mammal Strandings.

Reports of marine mammal strandings can be traced at least to ancient Greece. Stranding events can have natural or human causes. Approximately 15,000 large ships use the world's oceans daily. In contrast, only about 140 U.S. Navy ships and 35 submarines are underway at any time. About 60 percent of Navy ships are equipped with active sonar, which is used sparingly because it reveals the sending ship's position.

The Navy recognizes that active sonar may affect marine mammals under certain conditions, which is why the Navy actively works to minimize its impact on the marine environment. The Navy takes precautions and uses software tools when planning and conducting exercises to avoid certain factors that could potentially harm marine mammals.

As a result, sonar-related strandings, while unfortunate, occur very rarely. Worldwide, naval use of active sonar has been linked to stranding deaths of approximately 40 whales from 1996 to 2006. That is a fraction of one percent of the 3,500 strandings that occur each year on U.S. shores. Other, often-overlooked causes of strandings include: pollution, disease, parasites, ship strikes, trauma, starvation and unusual oceanographic or weather events.

CONTINUED FROM FRONT PAGE

Navy's Protective Measures

Funding research

Much remains to be learned about how marine mammals live, travel and respond to human activities in the ocean. The Navy is a world leader in marine mammal research, and currently provides more than $20 million annually to universities, research institutions, federal laboratories, private companies and independent researchers around the world to increase the understanding of marine mammal physiology and behavior. This research helps the Navy to better understand marine species distribution and important habitat areas, develop methods to detect and monitor marine species before and during training, understand the effects of sound on marine mammals, sea turtles, fish and birds, and develop tools to model and estimate potential effects of sound. The Navy also uses the results of these studies to develop new programs to protect marine mammals while training and testing at sea.

FOR MORE INFORMATION

To learn more about marine mammals, sonar and the Navy's ocean stewardship programs, visit

www.navy.mil/oceans

www.HSTTEIS.com

AUGUST 2010