



Atlantic Fleet Training and Testing

Environmental Impact Statement/ Overseas Environmental Impact Statement



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Commitment to Marine Resources through Protection and Research

The U.S. Navy strives to protect the marine environment of the Atlantic and Gulf coasts and the lower Chesapeake Bay region. The Navy's programs are continually improved as more is learned about marine ecosystems and species.

PROTECTING MARINE RESOURCES

The coastal and sea areas of the Atlantic and Gulf coasts and the lower Chesapeake Bay region are important to those who use these resources for commercial or recreational purposes. These areas are home to a vast array of marine plants and animals, including whales, dolphins, porpoises, seals, turtles, fish and birds.

These areas are also important to the Navy. They are necessary for members of the armed forces to learn and practice the skills required to respond to an emergency or national security threat. In addition, these areas are necessary for testing new and existing weapons systems in the real-world environments where the weapons will be used.

THE NAVY'S ONGOING PROTECTIVE MEASURES

Navy policy is to operate in full compliance with environmental laws. Environmental protection efforts have been a part of Navy activities for decades, enabling vital Navy training while protecting the marine environment. 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 thoroughly trained and required to follow these procedures.

Pre-exercise monitoring

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

Posting shipboard 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. Lookouts are posted on each ship when it is underway and additional lookouts are posted during training with active sonar.

Practicing marine habitat awareness

Sargassum mats (floating seaweed) and coral reefs are important habitats for marine species. Sailors familiarize themselves with known coral reef areas prior to commencement of the exercise and monitor for *Sargassum* mats in order to implement appropriate mitigation. Training activities are planned to avoid conducting potentially impacting activities

in and around established National Marine Sanctuaries. In addition, North Atlantic right whale habitat is avoided to the greatest extent possible.

Establishing safety zones for marine species

Naval ships avoid approaching whales head-on and maneuver to keep at least 500 yards away from observed whales. Additionally, safety zones have been established around training events that introduce sound into the water, such as sonar and explosives training and testing. For example, during active sonar training, if a marine mammal is detected within 1,000 yards the ship will reduce sonar transmission power. The ship 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 transmission.

Conducting safe navigation

While in transit, Navy Sailors 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.

SUPPORTING VITAL RESEARCH

Much remains to be learned about the marine environment and how marine mammals and other marine species 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
- Understand the effects of sound on marine mammals, sea turtles, fish and birds
- Develop tools to model and estimate potential effects of sound
- Develop methods to detect and monitor marine species before, during and after training

The Navy also uses the results of these studies to develop new programs to protect marine species while training and testing at sea.

APPLYING THE BEST AVAILABLE 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 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 areas within the Atlantic Fleet Training and Testing (AFTT) study area.

As part of the development of the AFTT EIS/OEIS, scientists will compile and analyze all currently available data and research, with a focus on marine species ecology and the potential effects of Navy activities.

Density and Abundance Estimates

Statistical tools allow estimation of marine species density and abundance based on analysis of shipboard and aerial surveys. This information has been compiled for the AFTT study area.

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, which are 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 model how sound propagates (travels) through an ocean with varied conditions. The results of these models indicate whether this propagation could lead to any potential effects on different marine species.

FOR MORE INFORMATION

To learn more about marine mammals, sonar and the Navy's ocean stewardship programs, visit www.navy.mil/oceans

The U.S. Navy is coordinating with the National Marine Fisheries Service on the development, implementation and results of an Integrated Comprehensive Monitoring Program for marine species. This program will assess the effects of training activities on marine species and investigate population trends in marine species distribution and abundance in various range complexes and geographic locations where Navy training occurs.

Objectives:

- Monitor Navy training exercises for compliance with environmental laws
- Identify and document coincidence of marine animals with Navy training
- Assess the effectiveness of the Navy's protective measures
- Document trends of habitat use in areas where Navy trains
- Monitor for potential behavioral and physiological effects
- Assess new technologies for monitoring and mitigation

Techniques:

- Visual monitoring
- Acoustic monitoring
- Photo-identification and tagging
- Oceanographic and environmental data collection

