



ATLANTIC FLEET TRAINING AND TESTING

ENVIRONMENTAL IMPACT STATEMENT/ OVERSEAS ENVIRONMENTAL IMPACT STATEMENT for Activities in 2018 and Beyond



MARINE RESOURCE PROTECTION

In accordance with the National Environmental Policy Act (NEPA), the Navy is using best available science and methods of analysis to assess the potential environmental impacts associated with conducting naval training and testing activities within the Atlantic Fleet Training and Testing (AFTT) Study Area, including activities that involve the use of active sonar and explosives. Most of these training and testing activities have been previously analyzed and authorized under the Marine Mammal Protection Act, and are similar to the types of activities that have been occurring in the Study Area for decades. Throughout the NEPA process, the Navy invited the National Marine Fisheries Service (NMFS) to participate as a cooperating agency in preparation of the Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS).



THE NAVY'S EXISTING MITIGATION MEASURES AT SEA

The coastal and sea areas off the east coast of North America and the Gulf of Mexico are important for recreation and commercial activities, and are home to a variety of marine plants and animals, including whales, invertebrates, dolphins, seals, turtles, birds, and fish.

Avoiding impacts from training and testing on the marine environment is an important goal for the Navy. In its commitment to environmental protection, and in compliance with existing laws, permits, and authorizations, the Navy follows strict guidelines and employs measures to reduce potential effects on marine species while training and testing. The measures listed in this fact sheet include some but not all of the Navy's existing mitigation measures at sea.

Posting qualified Lookouts

Navy personnel undertake extensive training to qualify as Lookouts in accordance with the Navy's Lookout Training Handbook. Additionally, all Lookouts must complete Marine Species Awareness Training (www.youtube.com/watch?v=KKo3r1yVBBA) approved by NMFS. Navy Lookouts visually observe for the presence of marine species within mitigation zones.

Implementing mitigation

The Navy developed mitigation zones, designed based on the activity being conducted, for activities that use active sonar, pile driving, air guns, explosives, vessels, towed in-water devices, and non-explosive practice munitions. The Navy halts or modifies activities when a marine mammal or sea turtle is observed in a mitigation zone.



Establishing mitigation areas for seafloor resources

The Navy establishes mitigation areas around important seafloor features, such as shallow coral reefs, live hard bottom, artificial reefs, and shipwrecks. The Navy does not conduct precision anchoring or explosive mine countermeasure activities within these mitigation areas.

Geographic and temporal mitigation

The Navy restricts some types of training and testing activities during certain times of the year and in specific geographic locations to further avoid impacts on marine mammals.

Navigating safely

While in transit, Navy vessel operators are alert at all times for objects in their path. Operators follow U.S. Coast Guard navigation rules, operate at a speed consistent with mission and safety, and take proper action if there is a risk of collision. Vessels avoid approaching marine mammals head on and maneuver to maintain a mitigation zone of 500 yards around whales and 200 yards around other marine mammals.

Reporting results

As part of its Integrated Comprehensive Monitoring Program, the Navy works closely with NMFS to coordinate monitoring efforts across all ocean regions where the Navy trains and tests. On the Atlantic and Gulf coasts, the Navy monitors marine species to better understand species occurrence. In addition to monitoring reports, the Navy also provides annual training and testing activity reports to NMFS.

SUPPORTING INDEPENDENT RESEARCH

The Navy is a world leader in marine species research and partners with state and federal agencies, universities, research institutions, federal laboratories, and private researchers around the world to better understand the potential effects the Navy's action may have on the environment. Much of this research is focused on:

- Marine mammal ecology and population dynamics
- Behavioral and physiological effects of sound on marine life
- Acoustic criteria and thresholds to assess effects of sounds on marine species
- Improved tools and methods to model potential effects of underwater sound
- Development of new technologies to improve the effectiveness of mitigation and monitoring

APPLYING THE LATEST SCIENCE AND TECHNOLOGY

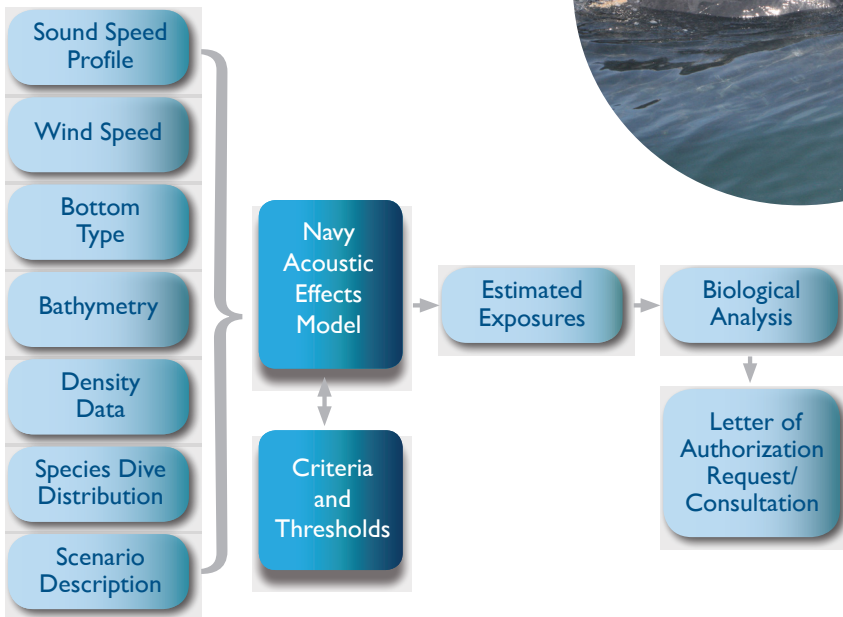
Protective Measures Assessment Protocol

The Protective Measures Assessment Protocol (PMAP) is a compliance and situational-awareness software tool that the Navy uses prior to conducting all training and testing activities. Based on the location, date, and type of activity being conducted, PMAP generates a report of the specific measures that must be implemented to protect marine resources and to ensure compliance with mitigation requirements. In addition, PMAP also provides a map that displays the location of the training or testing activity overlaid with relevant environmental data, such as mapped locations of shallow coral reefs. The final suite of required mitigation measures contained in the Navy and NMFS Records of Decision, the Marine Mammal Protection Act Letters of Authorization, and the Endangered Species Act Biological Opinions are integrated into PMAP.

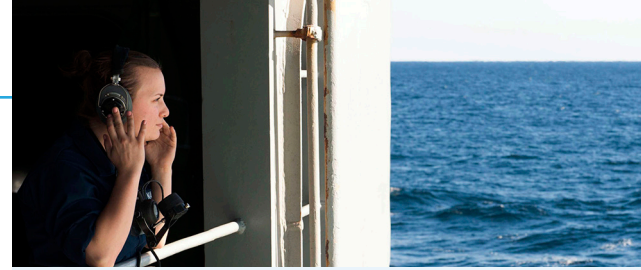
Quantifying Acoustic Impacts

The Navy has invested considerable effort and resources to model and analyze the effects of underwater sound sources used during training and testing activities. Based on recommendations from the NMFS-sponsored Center for Independent Experts, the Navy created the Navy Acoustic Effects Model (NAEMO).

NAEMO is used as part of the Navy's quantitative analysis process for estimating acoustic impacts on marine mammals and sea turtles. NAEMO factors in standardized parameters, such as marine species density, species-specific dive profiles, acoustic propagation data, Navy activity scenario definitions, and marine mammal and sea turtle acoustic criteria thresholds. Additional factors, such as avoidance of certain impacts on marine species through the implementation of mitigation measures, and avoidance by marine species of the area during training and testing activities, are also considered in the quantitative analysis process.



The Navy Acoustic Effects Model is an advanced modeling and simulation software tool used to assess potential effects on marine mammals from sonar and explosives. Visit <https://www.youtube.com/watch?v=G6FGmVSnT5c&t=2s> for more information.



MARINE MAMMAL MONITORING

The Navy has conducted training and testing activities in the AFTT Study Area for decades. Since 2006, the Navy has funded research and monitoring efforts to determine the effects training and testing activities may have on marine mammals.

This body of scientific research has provided several indicators that Navy training and testing activities are not having long-term consequences on marine mammal populations. These indicators include:

- Continuous presence of species and long-term residence by individual animals in high-use areas
- Occurrence of breeding, birthing, and nursing (North Atlantic right whale) in areas used for training and testing
- Lack of observable negative effects on marine mammal populations over nearly ten years of comprehensive monitoring and data collection



TAGGING NORTH ATLANTIC RIGHT WHALES

The coastal waters of northeastern Florida and Georgia serve as the winter calving ground for the North Atlantic right whale, yet animal movement patterns and vocalization rates within this habitat are poorly understood. Researchers from Duke University and Syracuse University are partnering with the Navy and attaching short-term, non-invasive suction cup tags to collect data on movement patterns, rates of travel, dive profiles, and sound production from this critically endangered species. This work will help inform the Navy about right whale behavior within and outside of Navy training ranges and testing areas, as well as help resource managers better monitor and protect this species.

Visit <http://www.navymarinespeciesmonitoring.us/> for more information.