



# ATLANTIC FLEET TRAINING AND TESTING

## ENVIRONMENTAL IMPACT STATEMENT/ OVERSEAS ENVIRONMENTAL IMPACT STATEMENT for Activities Beginning in 2018



### MARINE RESOURCE PROTECTION

Using the best available science and methods of analysis, the U.S. Navy is preparing an Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) 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, and are similar to the types of activities that have been occurring in the Study Area for decades.



#### 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, porpoises, dolphins, seals, turtles, birds, and multiple fish species.

Minimizing 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.

##### Observing the area prior to activities

Marine mammals and sea turtles can only be detected visually while at the surface, and marine mammals can only be detected acoustically while vocalizing underwater. Therefore, before certain activities are conducted, the area is scanned visually and, when possible, monitored acoustically.

##### Posting qualified Lookouts

Navy personnel undertake extensive training to qualify as a Lookout in accordance with the Navy's Lookout Training Handbook. All Lookouts must complete Marine Species Awareness Training ([www.youtube.com/watch?v=KKo3r1yVBBA](https://www.youtube.com/watch?v=KKo3r1yVBBA)) approved by the National Marine Fisheries Service (NMFS). For specified activities, Navy Lookouts visually observe for the presence of marine species within mitigation zones.



##### Establishing mitigation zones for seafloor resources

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

##### Navigating safely

While in transit, Navy vessel operators are alert at all times for objects in their path. Operators 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 monitoring 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. The Navy provides annual reports of training and testing activities and monitoring studies to NMFS.

**The Navy is committed to minimizing impacts on the marine environment as it trains Sailors and tests new technologies to defend the United States and its interests.**

#### FUNDING INDEPENDENT RESEARCH

The Navy is a world leader in marine species research. For more than a decade, the Navy has funded research and partnered with universities, research institutions, federal laboratories, and private researchers around the world to increase the understanding of marine species distribution, physiology, and behavior. This scientific research helps environmental regulators, scientists, and the Navy to:

- Better understand marine species distribution density
- Refine methods to detect and monitor marine species before and during training and testing activities
- Add to the body of scientific knowledge the effects of underwater sound on marine species
- Obtain data that can be used to model and estimate potential effects of underwater sound on marine mammals

## APPLYING THE LATEST SCIENCE AND TECHNOLOGY

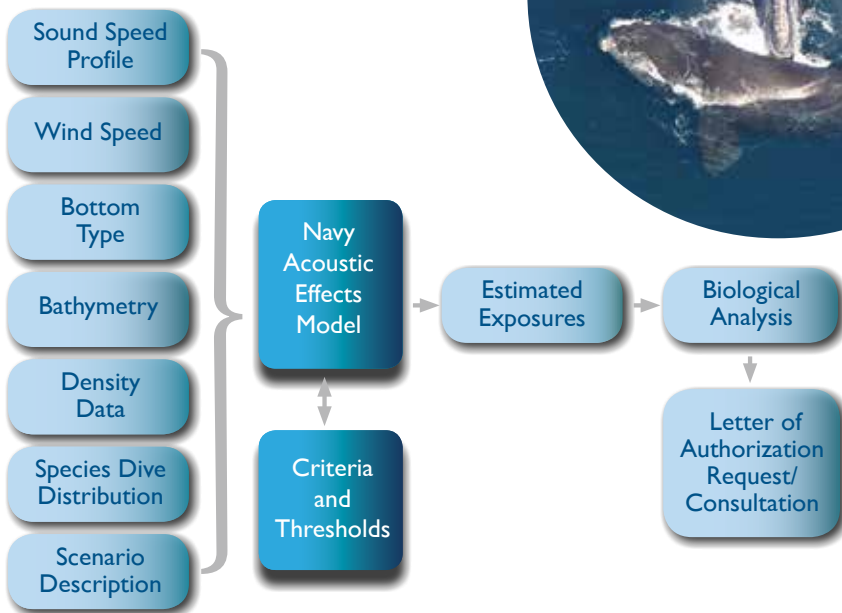
### Protective Measures Assessment Protocol

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 naval units must implement 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 relative to any protected or sensitive marine resources in the vicinity. 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 threshold criteria. 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 <http://greenfleet.dodlive.mil/environment/naemo/> 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 unlikely to have long-term consequences on marine mammal populations. These indicators include:

- Increases in the number of some species of marine mammals present in the AFTT Study Area
- Continuous presence of species and long-term residence by individual animals in high-use areas
- Use of training and testing areas for breeding, birthing, and nursing (North Atlantic right whale)
- 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 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.