

## **U.S. Navy East Coast Passive Acoustic Monitoring Efforts from 2009 to Present**

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The U.S. Navy's Atlantic Fleet conducts training and testing activities within the Northwest Atlantic Ocean and Gulf of Mexico, including the use of active sonar and explosives. In order to evaluate the impacts of these activities on marine mammals and other protected marine species, the Navy implemented a monitoring program to collect data on baseline animal presence, as well as exposure and response to Navy training and testing activities. Passive acoustic monitoring is an important component of the Navy's monitoring efforts.

Between 2009 and 2013, the Navy utilized effort-based monitoring metrics and targeted a number of different training and testing events for monitoring. Passive acoustic data was collected to monitor mysticete migration patterns in the mid-Atlantic, the effects of MFAS on odontocete vocalizations in North Carolina and Florida, and the potential effects of explosive training events off the coast of Virginia Beach, VA. Platforms included Marine Autonomous Recording Units (MARUs), High-Frequency Acoustic Recording Packages (HARPs), Ecological Acoustic Recorders (EARs), and sonobuoys, among others. Additionally, the Marine Species Monitoring Program has funded the deployment of acoustic recording tags on several marine species including pilot whales and North Atlantic right whales, as well as behavioral response playback experiments with short-finned pilot whales off Cape Hatteras, North Carolina.

In November 2013, the Navy began replacing effort-based monitoring metrics with objective-based monitoring projects as a result of new environmental permits for Atlantic Fleet Training & Testing (AFTT). Passive acoustic monitoring remains a cornerstone of the revised long term goals, and continues to provide key data on marine mammal presence and behavior. Future work will focus on species classification and animal behavior.

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