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[Home](#) [Join Us/Give Now](#) [About Us](#) [Act Now](#) [Search](#)

- **Wildlife & Fish**
 - Animals & Birds
 - Fish
- **Whales & Marine Animals**
 - In Brief**
 - In Depth**
 - Related Links**
 - Habitat Preservation

- Clean Air & Energy
- Global Warming
- Clean Water & Oceans
- **Wildlife & Fish**
- Parks, Forests & Wildlands
- Toxic Chemicals & Health
- Nuclear Weapons & Waste
- Cities & Green Living
- Environmental Legislation

- Magazine
- Reference/Links
- Publications
- Fun Features
- Subscribe
- Media Center

Wildlife & Fish: Whales & Marine Animals: In Brief: News

 [Email This Article](#)

Navy Sonar System Threatens Whales

The U.S. Navy wants to flood the world's oceans and coastal waters with sonar technology that deafens -- and kills -- whales and other marine mammals.

Around the globe, nations are testing and beginning to deploy "active sonar" technology, which uses extremely loud sound to detect submarines. The problem? Active sonar can injure and even kill marine mammals. It has been conclusively linked to the deaths of seven whales in the Bahamas in March 2000, and is thought to have caused a 1996 mass stranding of beaked whales on the west coast of Greece.

URGENT ACTION NEEDED!

Blocked by federal judge from widely deploying LFA sonar, the U.S. Navy is now seeking the power to exempt itself from environmental laws.

In late October 2002, ocean advocates thought they'd seen light at the end of the tunnel when a federal judge issued a preliminary injunction blocking the Navy from broad use of its new high-intensity LFA sonar system, which scientists say poses a threat to entire populations of whales, dolphins, seals and other marine mammals. The judge's decision, prompted by an NRDC lawsuit, held that the permit to deploy issued to the Navy by the Bush administration likely violates a number of federal laws, including the Marine Mammal Protection Act, the Endangered Species Act, and the National Environmental Policy Act. The judge also agreed that the science clearly



Researchers have found that many humpback whales cease singing when exposed to an LFA sonar signal that is hundreds of miles distant.

Photo: Bill Lawton / NMML

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demonstrates "the possibility, indeed probability, of irreparable injury" to marine mammals should LFA sonar be deployed widely.

Sadly, this reprieve has proved short-lived. Stymied by the law, the Department of Defense is now pursuing an outright end-run around the courts -- and the nation's environmental laws. Congress is now considering a Bush administration proposal to grant *continuous, across-the-board exemptions* for the Department of Defense from the laws that protect our air and water, clean up our toxic waste and conserve our most endangered species. These exemptions are being pursued even though current law provides for the waiving of environmental rules for reasons of national security.

For marine mammals, such blanket exemptions could be disastrous. The likely result of these dramatic changes would be weaker legal protection, less mitigation of the harm caused by military activities such as LFA sonar, and less information for the public. (For more information, see this [broad backgrounder](#) on the Defense Department's requests for exemptions from environmental laws, or this [detailed analysis](#) of the proposed amendments to the Marine Mammal Protection Act.)

Send a message telling your senators and representative that national defense shouldn't come at the expense of what the military is supposed to be defending, and that when national security is not at stake, no government agency should be above the law. [ACT NOW!](#)

The Bahamas Whale Deaths

In March 2000, four different species of whales and dolphins were stranded on beaches in the Bahamas after a U.S. Navy battle group used active sonar in the area. Despite efforts to save the whales, seven of them died. The Navy initially denied that active sonar was to blame, but its own investigation later found hemorrhaging around the dead whales' eyes and ears, indicating severe acoustic trauma. The government's study of the incident established with virtual certainty that the strandings in the Bahamas had been caused by mid-frequency active sonar used by Navy ships passing through the area. Since the incident, the area's population of beaked



Of the 13 beaked whales that stranded in the Bahamas in March 2000 after exposure to active sonar, seven died, including this one.

[Center for Whale Research](#)

whales has disappeared, leading researchers to conclude that they abandoned their habitat or died at sea. Scientists are concerned that, under the right circumstances, even the transient use of high-intensity active sonar can have a severe impact on populations of marine mammals.

Now the Navy is preparing to deploy an active sonar system that is potentially even more dangerous than the one that killed the whales in the Bahamas. This system, called Surveillance Towed Array Sensor System Low Frequency Active Sonar (or "LFA," for short), produces powerful waves of energy that can spread across hundreds of thousands of square miles of ocean. Even the Navy has conceded that the use of this system world-wide could harm many thousands of marine mammals, including significant numbers of species such as blue whales, humpback whales and sperm whales, which are already considered endangered..

According to the Navy, LFA sonar functions like a floodlight, scanning the ocean at vast distances with intense sound. Each loudspeaker in the system's long array can generate 215 decibels of sound. Worse yet, not far from the array the signals begin to combine, and the result as the signals travel can be as forceful as 240 decibels transmitted at the source. (To understand just how powerful these sounds are, keep in mind that the decibel scale used for measuring noise is like the Richter scale used for measuring earthquakes: both use small differences to express increasing orders of magnitude.) One hundreds miles from the system, the sound level would be from 150 to 160 decibels, still loud enough to cause permanent hearing damage in humans.

The Navy asserts that it will take precautions to make sure that whales or dolphins are not harmed by the use of LFA sonar, but many scientists say that too little is known about the effects of intense noise on marine mammals to support such a claim.

A Poor Track Record of Environmental Stewardship

LFA sonar was a Navy secret until 1994, when NRDC began investigating rumors that sound experiments were taking place off the California coast. Despite the Navy's stonewalling, it soon became clear that the Navy had already field-tested LFA sonar in 22 operations -- but had never studied its effects on marine life. Caught in violation of federal and state environmental law, the Defense Department agreed to conduct a full-scale study of environmental impacts

Immersed in Sound

Whales use their exquisitely sensitive hearing like humans use their eyes -- their hearing helps them follow migratory routes, locate one another over great distances, find food, and care for their young. Noise that undermines their ability to hear can threaten their ability to function and survive. As one scientist succinctly put it: "A deaf whale is a dead whale." But what concerns marine

and disclose how the sonar would affect marine mammals, sea turtles and other ocean species before putting the LFA system into use.

The Navy released a final Environmental Impact Statement in 2001, but it was disturbingly limited. Legally required to be a "rigorous and objective evaluation" of environmental risks, the study failed to answer the most basic questions about its controversial system: How will LFA affect the long-term health and behavior of whales, dolphins and hundreds of other species? Taking place as it does over an enormous geographic area, what effect might it have on marine populations?

scientists even more than short-term effects on individual animals is the potential long-term impact that the Navy's LFA system might have on the behavior and viability of entire populations of marine mammals.

Sound has been shown to divert bowhead and gray whales and other whales from their migration paths, to cause sperm and humpback whales to stop singing, and to induce a range of other effects, from distressed behavior to panic. A mass stranding of beaked whales off the west coast of Greece in 1996 was been associated with an active sonar system being tested by NATO. And the mass mortality of whales in the Bahamas only confirm the risks.

The New Threat to Coastal Waters

In recent years, NRDC has found that the Navy is continuing its troubling pattern of noncompliance with our nation's environmental laws. It has been testing new high-intensity active sonar systems in *coastal waters* -- areas of immense biological productivity that also happen to be crucial habitat for marine mammals -- again without conducting meaningful review of the technologies' environmental impacts and without meeting other basic requirements set forth in our environmental laws.

This new program, called Littoral Warfare Advanced Development, or LWAD, aims to bring active sonar from the depths of the ocean to the coasts. Among the systems being tested is an adaptation of the very same mid-frequency active sonar system responsible for the mass stranding in the Bahamas. NRDC is especially alarmed by the use of these systems in shallow coastal waters where there is greater potential for strandings of whales; our lawsuit, brought in the fall of 2001, is pending.

A Crucial Moment for the World's Marine Mammals

The U.S. Navy's active sonar systems have the potential to hurt whale populations across the world. They also represent a dangerous escalation in the proliferation of noise throughout the world's oceans -- whales are only one kind of marine life that evolved over millennia to depend for their survival on their ability to hear and be

heard. Now, with the noise generated by offshore oil and gas development, shipping traffic, and the Navy's new sonar technologies, the oceans can be as loud as Times Square at rush hour.

NRDC's efforts to bring attention to the serious risks of active sonar are aided immensely by the tens of thousands of messages our members and other activists have sent, demanding that active sonar not be used until the long-term safety of ocean wildlife can be assured. Please continue to help us keep the pressure on the Navy to meet its environmental obligations.

Related NRDC Pages

[We Need Sound Sensibility on California's Coast](#), by Jean-Michel Cousteau, Robert F. Kennedy Jr. and Joel Reynolds

[The White House Must Reject the Navy's Assault on the Oceans](#), by Jean-Michel Cousteau and Joel Reynolds

[Bad Vibes](#), from OnEarth Magazine, Summer 2002

[NRDC's Comments to the National Marine Fisheries Service](#)

[Sounding the Depths: Supertankers, Sonar, and the Rise of Undersea Noise](#)

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Visit NRDC's Earth Action Center to tell the Navy to [protect whales and other marine life](#) from dangerous Navy sonar.

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