



**DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS) and OVERSEAS EIS
HAWAII RANGE COMPLEX**

**Talking Points for Public Hearings Related to Ocean Noise
August 2007**

Background

The US Navy uses the land and waters around the Hawaiian archipelago (Hawaiian Range Complex, 235,000 nm² in size) to conduct warfare exercises. These exercises involve the use of active mid-frequency sonar and underwater detonations.

The National Environmental Policy Act (NEPA) requires that Federal Agency actions with the potential to significantly impact the environment must be assessed for their impacts. The Draft Environmental Impact Statement is the Navy's attempt to comply with NEPA and assess the potential impacts of its future warfare exercises. The Overseas component of the EIS is required because some of the exercises take place in international waters. NEPA requires that the public be allowed to participate in the NEPA process and thus the Navy is holding a series of public hearings in Hawaii to explain the DEIS and to receive public comment. After the comment period ends, the Navy will finalize the DEIS into a Final EIS and will deem that it has satisfied its NEPA obligations.

The National Marine Fisheries Service (NMFS) is a US Department of Commerce agency tasked with regulating threats to most marine species (some marine animals including sea otters and polar bears are the responsibility of the Fish and Wildlife Service). The Navy has applied to NMFS for authorization to "take" marine mammals during its war game exercises under the Marine Mammal Protection Act. The Navy also invited NMFS and NMFS agreed to be a "cooperating agency" in the development of the DEIS.

Both NMFS and the Navy will be present at the public hearings. Comments are due to NMFS on its planned issuance of the "take authorization" to the Navy by August 31, 2007. Comments are due to the Navy on its DEIS by September 17, 2007.

Active Sonar Harms Marine Life

- The Navy and NMFS acknowledge that mid-frequency active sonar can harm marine life yet they are prepared to jeopardize the rich marine life of the Hawaiian archipelago for the sake of playing war games.
- Marine animals rely on sound to navigate, find food, locate mates, avoid predators and communicate with one another. These life-critical behaviors can be significantly impacted by the introduction of man-made noise into their world.
- Mid-frequency active sonar emits sound at levels of 235 decibels – being measured on a logarithmic scale, that is a billion times more energy than the 145 decibel level which the Navy claims is safe for human divers.

- The impacts of intense ocean noise on marine animals ranges from behavioral disturbance to death. This noise also may have profound effects on the survival of some marine species. It also can decrease commercial fish catch rates by 70%.
- The oceans are becoming rapidly industrialized with ocean noise levels having doubled every decade for the past 6 decades in some areas.
- There is a growing list of stranding events coincident with active sonar use -Spain (2005), North Carolina (2005), Hawaii (2004), Canary Islands (2004, 2002, 1991, 1989, 1988, 1985), Washington State (2003), Virgin Islands (1999), Bahamas (2000), Madeira (2000), Greece (1996), and Japan (1990, 1989, 1987, 1979, 1978, 1968). Of these, the Navy in the DEIS admits to sonar being the causative factor in five of these cases (underlined)
- Necropsy findings indicate that noise from military sonar has resulted in mortality in marine mammals by causing hemorrhaging around the brain and other areas and/or by causing embolisms. Noise may also induce a panic response which can lead to death by stranding.
- Ocean noise can also impact humans, creating cause for concern for individuals and for commercial interests in diving, snorkeling, swimming and other water activities.
- The international community has recognized the threat that human-generated ocean noise can have on marine life. The Scientific Committee of the International Whaling Commission, the World Conservation Union, the European Parliament and European Commission and other international fora have all acknowledged the potential harm that ocean noise can have on the marine environment. The U.N. Secretary General has referred to ocean noise as one of five “current major threats to some populations of whales and other cetaceans,” and also included noise as one of the ten “main current and foreseeable impacts on marine biodiversity” on the high seas.

The DEIS

- The Hawaii Range Complex where the exercises will take place includes the Papahānaumokuākea Marine National Monument, designated in June 2006 because of its diverse and unique marine life (7,000 marine species, one quarter of which are found only in the Hawaiian Archipelago)
- Three alternatives are proposed, the Navy preferring alternative c):
 - a) status quo which would maintain the current number and frequency of exercises, including RIMPAC (915 of which include the use of active sonar);
 - b) an increase in the number, size and frequency of exercises (952 of which would include the use of active sonar); and
 - c) an even larger increase in the number, size and frequency of the exercises (1,145 of which would include the use of active sonar).
- The DEIS discusses the cumulative impacts of the impacts in relation to other federal actions, but does not investigate the cumulative or synergistic impacts of the various exercises themselves on marine life. Repeated exposure to active sonar can cause marine animals to permanently vacate an area which could be a life-critical habitat. It can also cause habituation which can have serious long term impacts on marine animal populations.
- The Navy used acoustic modeling to predict impacts to marine mammals from its active sonar use and underwater detonations in the exercises. This is an inexact science that cannot

accurately predict every eventuality in the real world. Actual data on historic marine animal stranding and disturbance events associated with active sonar use are far better indicators of the impacts of active sonar on marine animals.

- The Navy claims that its modeling predicts that without mitigation, 47,129 marine mammals could be behaviorally impacted by the exercises if the status quo is maintained, 1,281 marine mammals could experience temporary deafness and that one humpback whale could be exposed to active sonar at levels sufficient to cause permanent deafness (a deaf cetacean is a dead cetacean). The numbers predictably increase for the two other alternatives. The Navy's numbers are very low, given the large number of exercises and the abundance, density, certain species' social behaviors and the unpredictability of animals. Even NMFS is skeptical of the Navy's numbers advising it to "consider scientific uncertainty and potential for mortality". The Navy therefore revised increased the predicted number of animals to be severely impacted or killed to 20 but even this number seems arbitrary and low for the reasons stated. The take authorization request is for harassment to 26 species of marine mammals, including 7 seven endangered species in addition to causing serious injury and/or death of 2 bottlenose dolphins, 2 sperm whales, 2 melon-headed whales, 2 pantropical spotted dolphins, 2 pygmy killer whales, 2 short-finned pilot whales, 2 striped dolphins, 2 Cuvier's beaked whales, 2 Longman's beaked whales, and 2 Blaineville's beaked whales.
- The Navy is using 195 decibels (re 1 $\mu\text{Pa}^2\text{-s}$) as the threshold below which it says behavioral reaction will occur. Animals have stranded and died at much lower received levels than this.
- The Navy repeatedly mentions the lack of marine mammal strandings associated with its use of mid-frequency active sonar in Hawaiian waters in the 40 or so years that it has been using the technology. Absence of evidence is not evidence of absence. Not all affected animals beach. The vastness of the ocean and availability of predators significantly reduce the chances of affected animals being found and reported.
- The Navy's mitigation methods are woefully inadequate. They are: human observers (using night vision goggles at night), backed up with passive acoustic monitoring for vocalizing animals. These methods are not good enough to spot and then react to every single animal, every single time, within range of the moving sonar noise. Whales are diving animals, with some of the most vulnerable species, beaked whales, spending over an hour at depth. Human observers cannot be relied upon to catch every single marine mammal. Turtles only surface with their nostrils and so are almost impossible to see. Many fish never surface. Passive acoustic monitoring is only adequate for vocalizing animals.
- Even if an animal is spotted within 1,000 yards of the sonar dome (on the hull of the ship) the sonar will not be stopped but will be turned down by a mere 6 decibels to 229 decibels – still over 100 million times more intense than the Navy's human diver standard of 145 decibels and over a million times more than the noise level received by the animals in the infamous Bahamas incident of 2000 which stranded and died.
- The Navy claims that fish and sea turtles will be negligibly impacted because they cannot hear mid-frequency active sonar. The Navy does not adequately discuss the non-auditory effects of mid-frequency active sonar on fish and sea turtles. The Navy does admit that underwater detonations will kill and injure some fish but that the "abundance and diversity of fish within the Hawaiian Range Complex will not measurably decrease."